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NEW RESEARCH SHOWS A NEED FOR LARGE COMPANIES TO TAKE CONTROL OF THEIR ENERGY USAGE

Gasprom Energy, the Manchester-based specialist business gas and electricity supplier, recently conducted research among 200 energy decision makers, working in large businesses, to better understand the challenges they face today. Set against a backdrop of rising expectations about corporate environmental performance and an increasing number of technological innovations that have impacted on the energy market, the results of the survey demonstrate that the challenges facing energy buyers for large businesses are centred around cost reduction and control. Of those surveyed, a quarter (26%) stated that the challenge that most concerns them is cost control and improving profitability, while 15% put sustainability and environment at the top of their priorities. These results signal a strong need for businesses to understand how they can reduce their on-going energy costs and become more environmentally astute whilst also improving the bottom line. Much of this knowledge can be acquired by commissioning an energy audit, enabling businesses to take control through scheduling energy usage and maintenance and implementing effective energy strategies. Responsible energy use is also a growing consideration for large businesses looking to add value to their brand and is increasing in importance for those companies that have corporate social responsibility targets to meet.

Over three quarters of respondents (78%) felt that the effective procurement, use and management of energy is the most important factor in meeting regulatory compliance targets under schemes such as the EU Emissions Trading System (EU ETS) and Streamlined Energy & Carbon Reporting (SECR). REMIT is also relevant to those buying and selling gas under a flexible purchasing agreement. These schemes, currently underpinned with concerns surrounding energy usage from the wider general public, mean procurement and management of energy will become a larger part of many companies’ overall business strategy. A company’s cost structures - the types and relative proportions of fixed and variable costs incurred by the business - can be profoundly influenced by their energy decisions. This is critical for large companies that hold a tighter budget. Almost all respondents (93%) with 100-499 employees felt that cost control and improving quality were most relevant to the effective procurement, use and management of energy. When considering possible risks to energy supply, there appear to be significant concerns that could be alleviated through improved buyer insight into changes within the energy market. For example, 80% of respondents are concerned equally about price changes and the impact of energy restrictions. In the current economic and environmental climate this includes a range of factors such as the impact of ageing infrastructure and a rising population. Only half of those surveyed (54%) currently counter potential energy supply risks by improving supplier management and reducing down consumption to reduce restrictions. Energy suppliers and consultants can offer buyers in-depth market intelligence and support with forecasting, gained largely through data science, to give them the opportunity to fully optimise their energy strategies and mitigate risk.

In an era when we are all trying to be more environmentally conscious, large businesses have a responsibility to ensure that their energy usage is as economical as possible. By having greater understanding of consumption and better tools to enable them to closely monitor how this is changing over time, organisations can ensure they proactively address their corporate social responsibility in terms of energy reduction. www.gazprom-energy.co.uk.

Barclays backs University of Worcester to deliver its Green agenda

Barclays has worked with the University of Worcester to agree a £2m Green Asset Finance fund, which will be used to deliver on the institution’s commitment to sustainability. After becoming the first English university to secure EcoCampus Platinum status in 2010, and being named ‘Sustainability Institution of the Year’ in the 2019 Green Gown Awards, the University is looking to continue developing and improving its Green campus. Barclays funding is already helping to improve energy efficiency and waste reduction at the University’s sports arena, whilst there are plans for campus-wide LED lighting, electric vehicles, charging points and solar panels.

Katy Bloom, the University’s Director of Sustainability, said: “One of the University’s core values is to promote sustainable development. We work hard with our staff, students, governors and the wider community to look at ways to reduce our impact and to encourage more sustainable ways to live. This funding from Barclays is very welcome in helping us to achieve our goals.”

Professor David Green CB, the University’s Vice Chancellor and Chief Executive, said: “Successful University strategic plans have emphasised the importance of sustainability and inclusion in all we do. This has been empowering for students, staff and partners. “Of course, this needs sustained, scientifically informed investment. We are delighted that Barclays, our long-standing partner, has approached us to enable us to progress even more rapidly in becoming carbon neutral.”

Claire Hackett, Barclays Relationship Director, said: “We have developed a strong working relationship with the University of Worcester over a number of years, and we had no hesitation in supporting them with this Green Asset Finance deal. This funding contributes to the university achieving its sustainability goals, and underlines our commitment to higher education institutions within the public sector.”

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We already report on circa 200,000 meters – offering ‘snapshots’ of activity and alerts for wasteful scenarios. The reports come in shareable, static and interactive formats designed to drive tangible results. And, there’s even a Managed Service using machine learning and internal experts to do all the work for you. Basically, everything you need to reduce wastage and comply with energy legislation.
Total Heating and Hot Water Solutions

Our primary concern was to improve the reliability and energy efficiency of the heating and hot water provision,” he explained. “At the same time, we were keen to standardise the equipment to ensure easier maintenance, servicing and operation of this service moving forward. The Remeha boilers met all the criteria, they are easy to install as well as maintain and, as our experience shows, deliver outstandingly reliable performance.”

The fully condensing, direct-fired Remeha Water Heaters’ ECOflo units offer a cost-effective, energy efficient solution to meet the requirements at Anderson House. With a low NOx pre-mix power burner and an exceptional gross efficiency of up to 98%, this water heater range will also help keep emissions and running costs to a minimum for settle.

The installation at Anderson House is now complete and the new products are fully operational.

For more information on the Remeha Quanta range, visit: www.remeha.com/products/quanta-range/quantumace-30-115

For more information on Andrews Water Heaters ECOflo units, visit: www.andrewswaterheaters.co.uk/products/condensing-water-heaters/ECOflo

Baxi Heating selected to provide reliable total heating and hot water solutions at Flexicare’ accommodation schemes

Priva opens up remote access and digital building control for its Blue ID systems

Logan Energy to open Central Belt’s first hydrogen refuelling station for vehicles

Logan Energy is currently working with strategic partners to make its Wallyford base a ‘centre of excellence’ for hydrogen technology integration and safety. The opening of Logan Energy’s HRS comes hot on the heels of the UK Government’s £30 million funding support to several hydrogen projects across the UK tasked with investigating whether or not hydrogen could be used to slash emissions from sectors like industry and transport.

Baxi Heating selected to provide reliable total heating and hot water solutions at Flexicare’ accommodation schemes

Good partners are always crucial but particularly appreciated in times like these. Great work turn all involved!” Ann Khan, Executive Director of Customer Services at settle.

Social housing provider settle has selected Baxi Heating to provide reliable, energy efficient total heating and hot water solutions across two of their ‘flexicare’ schemes in Hertfordshire.

Flexicare accommodation is especially for people aged 55+ with a care need and offers a flexible approach to the amount and type of care given to each resident. Ensuring reliable, efficient heating and hot water provision is vital in essential schemes like these as failure of the plant could result in building closure.

As the landlord of the Flexicare locations, settle has responsibility for all building maintenance and repairs – including the heating and hot water systems. Following a detailed mechanical and electrical services condition survey at Anderson House in Hitchin, settle chose to replace the dated, failing plant with Remeha Quanta Ace boilers and Andrews Water Heaters’ ECOflo units. Remeha and Andrews Water Heaters are both part of Baxi Heating.

Reliability was a key requirement for settle’s Compliance Manager, Kevin Turner. “Our primary concern was to improve the reliability and energy efficiency of the heating and hot water provision,” he explained. “At the same time, we were keen to standardise the equipment to ensure easier maintenance, servicing and operation of this service moving forward. The Remeha boilers met all the criteria, they are easy to install as well as maintain and, as our experience shows, deliver outstandingly reliable performance.”

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For more information on Andrews Water Heaters ECOflo units, visit: www.andrewswaterheaters.co.uk/products/condensing-water-heaters/ECOflo

Priva opens up remote access and digital building control for its Blue ID systems

“Before UK is supporting the current widespread demand for remote digital building management with remote access and use of Priva Building Operator on all of its Priva Blue ID systems.

The announcement comes in response to the current situation where companies are increasingly asking employees to work from home as far as possible. In many cases this request is difficult to carry out, especially for building managers.

However, a suite of powerful digital tools which enable easy remote access and the appropriate operating software, Priva’s network of Partners – and end customers’ employees – can manage buildings from a distance. Relevant building data can be accessed from various mobile devices, thus enabling employees to work from their home office.

Priva Building Operator – which was launched in the UK earlier this year – allows users to access their system from any device with an Internet connection (mobile phone, tablet, notebook or PC). There is no need for additional installations or devices. www.priva.co.uk

Logan Energy to open Central Belt’s first hydrogen refuelling station for vehicles

A n Edinburgh based hydrogen technology firm has announced the opening of the first public hydrogen refuelling station (HRS) for vehicles in Scotland’s Central Belt. Offering the only refuelling stop between Aberdeen and Sheffield, some 360 miles apart, Logan Energy’s refuelling station will allow hydrogen-electric and dual-fuel vehicles to be refuelled to 30MPa.

With ambitious and legally binding 2050 Net Zero Targets in place, now is the time to realise the potential of hydrogen in creating a greener, cleaner energy system. A report issued by the public-private partnership Fuel Cells and Hydrogen Joint Undertaking, made conservative projections that fuel cell and hydrogen technologies will be able to generate 2,250 terawatt hours (TWh) of hydrogen in the European Union by 2050.

In short, this would supply around a quarter of the EU’s total annual energy demand, and could fuel 42 million large cars, 1.7 million trucks, around a quarter of a million buses and more than 5,500 trains.

With a strong belief in the hydrogen economy and its role in the future energy system, Logan Energy has financed this HRS itself and is offering this refuelling service to expand the potential of hydrogen in Scotland. It is also hoped that it will encourage people to consider hydrogen vehicles as viable green transport options.

The HRS is based at Logan Energy’s Wallyford facility less than a mile off the A1, and will offer safe, supervised fuelling by trained personnel during working hours.

Bill Ireland, CEO of Logan Energy, said: “While hydrogen promises revolutionary performance benefits and real reductions in carbon dioxide and other harmful emissions, the widespread uptake of these vehicles is restricted by the lack of investment in the deployment of refuelling stations.

“Refuelling is often offered as a package alongside the deployment of a fleet of hydrogen vehicles but without a proper refuelling infrastructure in Scotland, it is hard to get the buy in for investment in hydrogen vehicles. In turn, this lack of demand has made it harder than ever to create a case for building a proper refuelling infrastructure.”

The opening of Logan Energy’s HRS comes hot on the heels of the UK Government’s £30 million funding support to several hydrogen projects across the UK tasked with investigating whether or not hydrogen could be used to slash emissions from sectors like industry and transport.

Bill said: “While this recent UK Government investment is good news, we need more than just funding support if green hydrogen is to play its part in helping us reach Net Zero. We need sufficient Government support in the form of meaningful policy, backed up with effective “carrot and stick” legislation for both the expansion of hydrogen refuelling infrastructure and vehicles in Scotland. This needs to happen now as the deployment of the technology won’t happen overnight. With a Scottish ban on fossil fuel vehicle sales by 2035 and HGV sales by 2040, petrol filling stations will start to see a decrease in revenue imminently and we will need to look to the alternatives to survive. Our technology offers part of the solution.”

Logan Energy is currently working with strategic partners to make its Wallyford base a ‘centre of excellence’ for hydrogen technology integration and safety. The opening of this refuelling station is one step towards achieving this goal.

As part of this mission, Logan Energy will also be developing plans to produce green hydrogen on site, through electrolysis powered by solar power. www.loganenergy.com

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Northern Gas and Power Surge Ahead

Northern Gas and Power has placed second in the prestigious Sunday Times’ Profit Track 2020 league table, which records the fastest UK business growth. It is the start of another successful year for the company, with a 116.63% increase over three years.

For Northern Gas and Power, the message is simple: everyone must pull together. "I’m especially proud of our staff who have taken initiative by delivering vital drop offs to support local charities," Mr Islam added. "We’re proud of the community support offered and we’re always looking to do more. Here at Northern Gas and Power, like the rest of the country, we are all looking forward to the end of this crisis to celebrate and continue our global growth." www.ngpltd.co.uk/A400-A700-Series.

FLIR LAUNCHES SMART THERMAL SENSOR SOLUTION FOR INDUSTRIAL MONITORING AND ELEVATED SKIN TEMPERATURE SCREENING

Initial shipments of New FLIR A400/ A700 Thermal Sensor Solution to be prioritised for Entities Working to Mitigate the Spread of COVID-19 Virus

FLIR Systems, Inc. announce the FLIR A400/ A700 Thermal Smart Sensor and Thermal Image Streaming fixed camera solutions for monitoring equipment, production lines, critical infrastructure, and screening for elevated skin temperatures. These highly configurable smart camera systems provide accurate, non-contact temperature monitoring across a wide range of disciplines; manufacturing process control, product development, emissions monitoring, waste management, facilities maintenance, and Environmental, Health, and Safety (EHS) improvements. The FLIR A400/ A700 Thermal Smart Sensor solution initially will be prioritised for those responding to COVID-19. For all applications, the series offers multi-image streaming, edge computing, and Wi-Fi connectivity to help speed data flow and enable faster decisions, improving productivity and safety for professionals.

FLIR designed the A400/A700 cameras with two configurations to better meet application-specific needs: The Thermal Smart Sensor solution, recommended for measuring elevated skin temperatures, incorporates advanced measurement tools and alarms with edge computing to enable faster critical decisions. The Image Streaming configuration provides multiple thermal streaming capabilities to help optimise process control, improve quality assurance, or identify potential failures that could shut down production.

Users design their systems by choosing either the Smart Sensor or Imaging Streaming configuration, selecting either the A400 or A700 camera body based on the resolutions they need, and then adding lenses and a range of optional features to fit their application. Also, FLIR currently is in beta testing for an automated elevated skin temperature screening software solution that is fully integrated with its United States Food and Drug Administration-certified thermal cameras. The solution is designed to rapidly increase the accuracy, ease-of-use, and speed of existing screening procedures. FLIR will share an announcement about its solution in Q2 2020. www.flir.co.uk/A400-A700-Series.

SMARTER GRID SOLUTIONS LAUNCHES ANM STRATA 3.0 TO ACCELERATE THE NET-ZERO CARBON TRANSITION

The release of ANM Strata 3.0, Smarter Grid Solutions’ third generation DERM, moves power companies a step closer to being able to monitor and manage tens of thousands of distributed energy resources (DER) simultaneously.

At present, control systems can only handle tens of hundreds of devices, but the need to manage thousands is a near term prospect. ANM Strata 3.0 elevates the capabilities of power companies onto the next level, making it easier for them to manage more devices than ever before.

The new version of the distributed energy resources management system (DERMs) will allow even more renewable energy devices to be connected to power grids, helping countries to meet their commitments under the Paris Agreement and ahead of the United Nations COP26 environmental summit in Glasgow in November.

The release of the latest upgrade is a major step towards helping network providers to enable the net-zero carbon dioxide emission targets being set by a growing number of countries.

As well as handling more DERs, this new product release is better placed to manage battery energy storage, which will be a key component in energy systems for storing the increasing amount of electricity generated by intermittent renewables, helping to better balance supply and demand and provide required flexibility to keep the grid stable.

As with all of its software, SGSS’ new product boasts leading cyber-security credentials and can generate and manage more data to support better DER and grid analytics programs. SGSS will add new state-of-the-art security features as it encounters new use cases in order to meet the challenge that comes from scaling to thousands of devices.

Colin Gault, head of products at SGSS, said: “ANM Strata 3.0 is a leap forward in network operators’ abilities to meet the challenges of reaching net-zero and tackling the climate emergency.”

“Renewable energy and energy storage are essential components to decarbonise our power networks and this is the software that will enable much larger numbers of energy devices to be integrated into the grid while maintaining stability.

"With the latest version of our software, we have made some foundational changes to the underlying platform that support our product vision of mass scalability with no impact on availability, security or performance. “ANM Strata 3.0 also includes extensions to the existing DER dispatch application and more customisation of the user interface.”

Users can now customise their own dashboards and share them with colleagues, as well as creating their own widgets.

DERM improvements include:
• asset scheduling with user defined validation rules specified
• the dispatch application now supports power factor dispatch improvements to the optimisations of merit order stacks in the configuration tool
https://www.smartgridssolutions.com/
I have been banging the drum for years about how changing behaviour is key to our climate change, and how the potential for energy and carbon savings from behaviour change is at least as much as any technological change, I feel sad to say there is no pleasure in saying I told you so, I was right all along, but it's true and the evidence is now more wide-spread than ever before.

I have been working with ESTA, the Energy Services Technology Association, for the last 18 months to develop an evidence base for where very positive results have been achieved as a result of implementing energy behaviour programmes so that these can be used as evidence to encourage others. There are some very striking case of great programmes that have worked. In one example, delivered by JRP, savings of 8.9% were made following a 130k behaviour change programme, the same savings as a 44% Cut Energy Use policy scheme for the same client. We have also been lobbying Government to acknowledge the role of behaviour change programmes and incentivise organisations to implement them. It has been a frustratingly slow journey with, I'm sorry to say, little to show for the effort.

What we all see right now is a real life case study on how the changes in our behaviour as a result of the Coronavirus pandemic have had a profound positive impact on our world, reduced use of fossil fuels, reduction in greenhouse gas emissions, improved air quality, wildlife thriving, clean water, dolphins swimming in the Ganges and the colours of our skies.

Before Covid-19, the transport sector had not seen the same gradual decline in emissions as other sectors. This crisis has shown us that cleaner skies and breathable air can be achieved very fast if concrete action is taken to reduce burning of fossil fuels but the global carbon emission reductions that the Covid-19 lockdowns are causing need to be repeated each and every year to prevent a 2 degree temperature rise.

One thing is certain however, individuals and organisations will not voluntarily and willingly make the necessary changes on their own. The main cause of air pollution in cities. Before Covid-19, the transport sector had not seen the same gradual decline in emissions as other sectors. This crisis has shown us that cleaner skies and breathable air can be achieved very fast if concrete action is taken to reduce burning of fossil fuels but the global carbon emission reductions that the Covid-19 lockdowns are causing need to be repeated each and every year to prevent a 2 degree temperature rise.

The UK Government has indeed made strong commitments to reducing greenhouse gases by passing laws to achieve Net Zero greenhouse gas emissions by 2050 and businesses are coming under increasing pressure to manage and reduce their emissions to meet this target. But we know that 50% of the opportunity to reduce energy consumption is being missed due to organisations focusing solely on technical opportunities. Behaviour change represents 50% of the global Net Zero opportunity but is rarely implemented.

It is encouraging to see that many Government, businesses and civil society organisations and individuals to resolve the climate change crisis. The Government has indeed made strong commitments to reducing greenhouse gases by passing laws to achieve Net Zero greenhouse gas emissions by 2050 and businesses are coming under increasing pressure to manage and reduce their emissions to meet this target. But we know that 50% of the opportunity to reduce energy consumption is being missed due to organisations focusing solely on technical opportunities. Behaviour change represents 50% of the global Net Zero opportunity but is rarely implemented.

It is encouraging to see that many organisations have now Net Zero on their radar as a business objective. Some organisations have already achieved Net Zero, and the World Bank Group for example, have set a target to be carbon negative by 2030.

CARBON NEUTRAL VS CARBON NEGATIVE: WHAT IS THE DIFFERENCE?

Valpy Fitzgerald, Director of Green Markets at renewable energy provider, Opus Energy

As the conversation around sustainability develops past the point of the hypothetical, we find ourselves at a decisive moment for the future of our energy systems. The world has legislated to become carbon neutral by 2050, and has already begun working on policies that will cut greenhouse gas emissions. But what does it mean to remove carbon from the air, and what will end up with less overall carbon emissions than they started with.

Again, carbon negative has a number of other terms associated with it, but it is the ultimate goal for all organisations.

TAKING THE NEXT STEP

It is undoubtedly a step in the right direction for businesses and organisations to commit to a carbon reduction plan, but it's also important to look at the bigger picture and take the next step to reduce the overall emissions in the environment. While cutting down on air travel, using LED bulbs and switching electric vehicles is to be applauded, industry leaders and governments now need to shift their focus to removing the carbon that already exists in the atmosphere. This can be proactively working to ensure no more emissions are released world-wide until the problem is resolved.

What we see is that the changes in our behaviour as a result of the Coronavirus pandemic have had a profound positive impact on our world, reduced use of fossil fuels, reduction in greenhouse gas emissions, improved air quality, wildlife thriving, clean water, dolphins swimming in the Ganges and the colours of our skies.

Although Covid-19 is most likely the biggest global crisis since the Second World War, it is still dwarfed in the long term by climate change. The world will never be the same after Covid-19 but what are we learning and what opportunities can we capitalise on?

The world will never be the same after Covid-19 but what are we learning and what opportunities can we capitalise on?

Behaviour change is the key to climate change
SAY YES TO SUSTAINABILITY: BUILDING THE PERFECT BUSINESS CASE

Katie Burrows, Energy Services Solutions Manager at Haven Power

F or many of us, sustainability is an everyday practice – a mindset we actively choose to cultivate for the good of the planet and those around us. We’re well familiar with the benefits, both on an individual and collective scale, and have taken measures to reduce our own carbon footprint.

But bringing these values to the workplace and asking others to do so can often feel like a losing battle. When you’re the only person in the room that lives and breathes sustainability at work, it’s far too easy to educate your superiors about the benefits of greener practices - especially when making sustainable changes is often linked with pressure to spend more money.

So, here are some top reasons that will help flesh out a robust business case to the decision makers of your organisation.

REPUTATION AND CUSTOMER LOYALTY

If you part of a consumer-facing organisation, your customers are at the focus of everything you do. Whether the business is reviewing its manufacturing processes, customer service offering or management structure, the outcome of change is expected to benefit the consumers that invest their time and money in your service or product.

But who says that customers care about how sustainable your practices are? Well, according to research by Unilever, a third of consumers now choose to buy from brands who they believe are doing social or environmental good. Whether that be reducing the amount of plastic packaging they use, recycling products or using a sustainable energy source, it all counts towards reducing your carbon footprint.

As a part of reaching net zero by 2050, the UK government has brought forward its ban on petrol, diesel and hybrid cars from 2040 to 2035. As a business, investing in electric vehicles is a huge investment, but it’s one that shouldn’t be immediately dismissed. There are a lot of things to be considered, but making the transition to electric vehicles will have both a significant impact on your carbon footprint and even save the business money in the long run. That’s because EVs can help a business save around 20% on fuel costs and 30% on maintenance, with the added benefits of free road tax and a lack of congestion charges, too.

GOVERNMENT REGULATIONS

As climate change has become a more pressing issue within our society over recent years, the pressure on businesses to commit to a greener strategy and actively reduce their carbon footprint has been mounting. The UK Government has committed to achieving net zero by 2050, while the target in Scotland is even more ambitious - 2045. It falls upon business and organisations within the UK to make rapid adjustments to their policies, processes and products in this time, and so starting to make changes as soon as possible is vital. Almost half of UK businesses have already put plans in place to reach net zero by 2050, with one in ten already there.

So far, there has been a vast improvement in the amount of carbon emissions that are produced in the UK, particularly through electricity generation. A third (33.3%) of electricity generated in the UK in 2018 came from renewable sources, and whilst this was a vast improvement on previous years, this number needs to continue to rise to meet net zero.

As a part of reaching net zero by 2050, the UK government has brought forward its ban on petrol, diesel and hybrid cars from 2040 to 2035. As a business, investing in electric vehicles is a huge investment, but it’s one that shouldn’t be immediately dismissed. There are a lot of things to be considered, but making the transition to electric vehicles will have both a significant impact on your carbon footprint and even save the business money in the long run. That’s because EVs can help a business save around 20% on fuel costs and 30% on maintenance, with the added benefits of free road tax and a lack of congestion charges, too.

SAVING MONEY THROUGH ENERGY CONSUMPTION

Whether it’s mostly used to power machinery, refrigerators or computers, energy often accounts for a significant percentage of an organisation’s operating costs. And, while the decarbonisation of the UK’s energy supply to achieve net zero is predicted to cost over £1 trillion, the board are likely to want to know exactly how this might impact the business’ profitability. According to our own research here at Haven Power, over a third (37%) of businesses think that it would be too costly to implement renewable energy, but we actually know that businesses can use renewable energy to save money.

The easiest way to gain an understanding of how energy consumption can impact the business and its carbon footprint is to engage in a conversation with an energy supplier directly. An expert might, for example, suggest joining Demand Side Response (DSR) programmes, which give you the opportunity to earn extra revenue by altering your energy consumption patterns. Or, perhaps switching to a self-generated or stored electricity at peak times might be of benefit. As this is when power is at its most expensive. If you have the land and resources available, generating your own electricity using solar panels or a wind farm could be a great way to make some additional revenue. Organisations can get paid for generating their own electricity by setting up a renewable Purchase Power Agreement (PPA) with their energy supplier. It means your business receives the financial benefit of selling energy back to the grid, just without the administration.

Committing to using greener practices as an organisation is not only a positive way to reduce your carbon footprint and reduce your negative impact on the planet, but there are also numerous benefits to the organisation from a business perspective. Offering a vast range of benefits, implementing more sustainable measures is an essential way to future-proof your organisation, enabling you to keep up with the competition and having a positive impact on your consumers.

Ensuring that your business case for sustainability is backed by strong, relevant and reliable arguments is the key to helping the decision makers above you share your vision for change. www.havenpower.com
NOW IS THE TIME TO TAKE CONTROL OF YOUR ENERGY USAGE!

The corona virus crisis has impacted every aspect of our lives and, let's be honest, the impact has been almost entirely negative, with many business premises currently standing unused and unstaffed. So, if you're a facilities or operations manager, taking control of your company's energy usage may well be the last thing on your mind. But, says Julian Grant of Chauvin Arnoux, this is actually a very important time to be ensuring that your business is not using and paying for energy it doesn't need.

A few years ago, I was working for British Gas, and I remember well how they would sell their power plans to companies. These were power contracts which would lock a company into buying its primary energy at a pre-agreed price. At the time, there was a lot of controversy and the market was not always fair to the consumer. Now, with the advent of smart meters, the power industry has become much more transparent, and there are much better deals available. Companies can now shop around and find the best deal for their needs. It’s a great opportunity for businesses to save money on their energy bills.

One of the key challenges for businesses is to monitor and control their energy usage. This is where portable energy loggers (PELs) come into play. A PEL is a portable device that can be used to monitor and record energy usage. It can be used to monitor energy usage in a wide range of applications, from single-phase to three-phase systems. The PEL can be used to monitor energy usage in a wide range of applications, from single-phase to three-phase systems. The PEL can be used to monitor energy usage in a wide range of applications, from single-phase to three-phase systems.

The key advantage of a PEL is that it can be used to monitor energy usage at any time, even when the business is closed. This is particularly useful for businesses with a large number of branches or remote locations, as it allows them to monitor energy usage from a central location. The PEL can also be used to monitor energy usage during off-peak hours, which can help to reduce energy costs.

Another advantage of a PEL is that it can be used to identify inefficiencies in energy usage. The PEL can be used to identify which areas of the business are using the most energy, and this can help to identify areas where energy savings can be made. For example, a PEL can be used to identify which appliances are using the most energy, and this can help to identify areas where energy savings can be made.

In conclusion, portable energy loggers (PELs) are a valuable tool for businesses looking to monitor and control their energy usage. They are easy to install, easy to use, and provide valuable insights into energy usage. Companies that invest in PELs can expect to see significant savings on their energy bills, and they can also expect to improve their energy efficiency and reduce their carbon footprint.
Putting the App into Happy Holidays

The smart way to meter, measure and manage energy resources for operators and holidaymakers alike.

What’s the simplest way for holiday park operators to offer customers a simple but secure opportunity to pay for their gas or electric? The smartest solution undoubtedly comes from Chris Smith, Energy Controls MD, making it easy for customers to pay for their energy while they’re taking it easy.

And it couldn’t be more straightforward or more rewarding.

Pay-as-you-holiday

Whether you’re looking to streamline your energy overheads with automated meter readings or be paid upfront with the latest prepayment system, Energy Controls has the products and expertise to help. With a fully hosted, web-based software solution linked to market-leading PayPoint, it allows operators to offer holidaymakers the perfect 24/7 pay-as-you-go service. Energy Controls’ award-winning SMART meters are ideal for all types of sub-metering applications, ranging from landlord properties to holiday parks and housing associations. And they’re backed by Chris and his team’s almost thirty years’ tried and tested experience.

An E470 GSM SMART meter offers the most flexible metering solution to give complete control of your energy resources.

- Approved to new Measuring Instruments Directive (MID) standards
- Prepayment of your electricity supplies
- Exclusive access to PayPoint retailers
- Top-up online or via our FREE app
- Friendly disconnection override
- Remote supply disconnect/reconnect
- As installed by British Gas and other major energy supply companies

Business booster

As the UK’s premier operator of prepayment metering services to the landlord sector,

Energy Controls has invested heavily in an IT infrastructure that delivers a secure, reliable and robust online payment solution. It gives owners and holidaymakers alike immediate access to their energy usage data around the clock and payments can be made online anytime from anywhere using the free smartphone app. And who doesn’t have a smartphone these days!

“The prepayment opportunity that our SMART Meters offer our customers provides an instant boost to cash flow” Chris Smith, Managing Director.

Happy holidaymakers

Energy Controls’ SMART meters come equipped with many customer-friendly optional settings designed to prevent out-of-hours power loss. These include push-button emergency credit and disconnection override periods as well as predefined holiday dates when power will remain on even if the credit expires. Not only do these settings reassure consumers, they also take the pressure off operators re-selling energy, leaving them free to get on with running their business.

Happy customers

But you don’t have to take Chris’s word for it. Simply read what one of the Directors at Darwin Forest Country Park had to say.

“Having dealt with Energy Controls for the past 25 years, I can highly recommend them. They offer a reliable and valuable service, especially when overspending on energy can become an issue, particularly with unoccupied accommodation. Energy Controls’ products are extremely effective and their metering systems allow us to remotely monitor the energy usage in each lodge so that we can accurately manage our energy overheads.”

The Finance Director at Billing Aquadrome went even further.

“The way that we manage our electricity supplies is vitally important to our business and to the customer service that we provide, but it can involve significant investment. With Energy Controls, the entire process has been completely cost-neutral, from the supply and installation of the meters to the infrastructure and training. It’s all covered by a small daily service charge we can pass on to our customers through the meter.”

Fit for FREE

Energy Controls is happy and well equipped to offer a complete service from free survey to installation, together with full training and after-sales support.

Why not call Chris Smith on 0345 230 4535 now to see if you qualify for a ‘Fit for FREE’ supply and installation service. It could be the happiest move you ever make!
HOW TO COMPLY WITH UPDATED HEAT NETWORK REGULATIONS

Ian Allan, Head of Strategy for Switch2 Energy, offers guidance on the steps communal heating suppliers must take to comply with the updated Heat Network (Metering and Billing) Regulations (HNMBR).

The regulations, which stem from the EU Energy Efficiency Directive, are applicable to most sites that distribute thermal energy for heating, cooling or hot water from a central source to more than one end user, building or location. Legislation is enforced by the Office for Products & Safety Standards (OPSS).

Regulations are currently being updated as part of the Heat Network Market Framework. One of the most significant areas of consultation is a requirement to retrofit final customer meters to non-metered homes, where a revised new feasibility tool shows that it is viable. Other proposals include extending provisions on meter accuracy, maintenance and billing.

The requirement to retrofit final customer meters at existing non-metered properties is not yet compulsory, but this is likely to change soon. Consultation is currently underway as part of the Heat Network Market Framework, including proposals for a revised new feasibility tool, which will determine the viability of retrofitting final customer meters to non-metered homes.

This will replace the original tool, which was suspended in 2015 and has now been re-designed. When the new tool is released, heat suppliers with non-metered networks will have to test the scheme to determine whether it is viable to install meters or heat cost allocators and then take any required corrective action. This test must be repeated every four years and it is expected that all heat networks will need to be fully metered over time.

3. BILLING

End customers must be billed using actual meter readings (rather than estimates) at least once a year. Those customers receiving bills electronically should, however, be invoiced quarterly. At a minimum, bills must contain current energy prices, details of total consumption (compared to the previous year, if applicable) and general information on how to improve energy efficiency.

The legislation imposes duties on the heat supplier, but OPSS has issued guidance on how these responsibilities may be shared between billing managers and network managers or owners, subject to discussions on who is best placed to undertake these duties.

Simplifying Compliance

Innovative new pay-as-you-go (PAYG) smart meters can simplify the compliance process and drive behavioural change by giving customers full visibility of how much energy they are using and how much it’s costing them. This leads to significant cost and carbon savings.

In our experience, where we have installed smart metering and pay-as-you-go billing, heat usage has been reduced by up to 50%, compared to unmetered dwellings. OPSS has confirmed that PAYG systems are compliant if:

• Billing information is available on the PAYG unit at any time.
• The PAYG unit has an approved in-home display feature.
• Meter readings are available on the unit.
• An annual billing statement is provided to customers.

Further information: www.switch2.co.uk

Reduce Installation Costs, Maintenance and Life-Time Servicing with the U1000 Range of Clamp-on Flow Meters from Micronics

Measuring and manage your energy and water costs with the new U1000MKI range of Clamp-on flow meters from Micronics. The U1000 range is the smart alternative to cutting pipes and conventional in-line, mechanical meters, for sub-metering of water, heat or cooling energy. Its clever clamp-on design provides easy to use, low cost flow measurement from outside the pipe. And the ultrasonic device can be used as a stand-alone meter or as an integral part of a Building or Energy Management system. It’s simple to install, just connect the power, enter the internal pipe diameter, adjust the flow line and no pressure drop, process communication and M-Bus.

The Micronics fixed, clamp-on - Headmeter and Water Meter and Water Sub-metering systems are compliant if:

• U1000MKI-HM offer significant benefits over conventional in-line meters.
• Optionally Modbus, RTU slave, RS485 serial and M-Bus communication

Quick set-up and flow readings without the need to drain down or cut into existing pipework.

Non-invasive, so no inserts in the flow line and no pressure drop, process contamination or pipe fouling.

As the product line is non-invasive, servicing and maintenance does not require drain-down of systems, so availability is improved, a key benefit in critical HVAC applications such as Data Centres, busy Airports, and Hospital Theatres.

‘A Best Value’ non-invasive clamp-on solution for heat energy and water sub-metering applications i.e. we won’t be beaten on price for like for like performance.

If you would like further info, pricing for a project or a no obligation demonstration please contact Tracey Rolf on our sales office on +44 (0) 1628 642057 or email Tracey.Rolf@micronicsltd.co.uk.

REWRITE INSTALLATION COSTS

Maintenance and Life-Time Servicing with the U1000 Range of Clamp-on Flow Meters from Micronics

Meters supplied with heat to install point of entry meters, or bulk meters, which record the amount of heat delivered into a property from the plant room or energy centre.

b. Final customer meters

It is also mandatory to install final customer meters on new builds and most building heating major renovation. If these meters are not feasible, the viability of heat cost allocators must be considered. The meters require scheduled servicing alongside periodic recalibration of heat cost allocators.

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Further information: www.switch2.co.uk
lower your energy usage on lighting whilst still accounts for their biggest energy expense.

There are certain steps varied sectors in the retail sector. However, making sure that available locking and hardware are compatible with your adopted house security.

Technocover can tailor its systems to existing security protocols by supplying the preferred access control system (eg key, card reader, fobs, swipe) and hardware that supports CCTV and alarm networking while adhering to LPCB criteria. Other options, such as emergency panic bar exit, vision panels and internal override handles on security roof hatches, will help support the effective control of site access and emergency exit for authorised personnel.

Access cover applications may require an assisted lift mechanism, safety stays and fall protection to comply with regulations on manual handling and falls from height.

ACHIEVE BEST VALUE SOLUTIONS TO COMPLEX NEEDS THROUGH ‘TOTAL SERVICE’

Careful design and planning will be necessary for more complex applications, for example, large access cover assemblies over plant, secure access for woodchip bunkers, or the integration of mesh enclosures and kiosks around existing assets.

An experienced design-to-install LPCB specialist of 27 years, Technocover works closely with clients on bespoke applications to identify and resolve operational, safety and installation issues and build in maximum functionality within LPCB parameters. This reduces the risk of reactive maintenance and unplanned interventions, achieving the best whole life value from your security investment.

Technocover’s Total Service Range from technical innovations, such as solar power modules on cabinets and public sliding gates on security enclosures, to a full construction service, from site preparation, concrete work and CDM compliant project management to life-time maintenance.

Where site access is constrained or downtime is an issue, Technocover provides bespoke assembly of its modular buildings with prefitted M&E services, including heaters, along with optional racking systems, aesthetic interior wall panels, and different floor finishes such as anti-slip. These can be craned in and connected within hours for minimal impact on operational continuity.

FINISHING TOUCHES – DOES IT MEET AESTHETIC AND DURABILITY CONSIDERATIONS?

Premature ageing of operational assets and their vulnerability to the effects of climate change are of increasing concern. Security equipment that is not sufficiently ‘climate-proof’ will be a drain on maintenance budgets while risking service disruption if it succumbs to water, heat or wind damage from extreme weather.

Technocover uses high quality steel, galvanising and paint processes to provide 25-year service life. This assures a maintenance-free security system and extended time to replacement, to assist with reliable cost forecasting and resilience planning.

Other features for weather resilience include domed, water-shedding access covers and roofs, raised thresholds on walk-in kiosks, and water sealing systems. Doors, kiosks and local windows can be made to blend with contemporary or traditional architecture, using features such as arch headers and colou finishings, including wood effects.

Technocover is a leading designer, manufacturer and installer of LPCB certificated UltraSecure physical security solutions, proven for critical infrastructure and government sites and backed by a Total Service design-to-install capability.

www.technocover.co.uk 01938 555511
Britain experienced its biggest blackout in more than a decade this summer due to two power plant outages, leaving almost a million homes across the country in the dark. Because of this, the energy watchdog and the government have raised concerns about the grid’s ability to cope with changing energy needs and demands. Here, Alan Binning, Regional Sales Manager at energy software developer, COPA-DATA, explains how microgrids could help.

A microgrid is a small-scale power grid that can operate independently or collaboratively with other areas of the grid. Combining a range of generation sources with energy storage and intelligent load management, microgrids are hailed as the solution to providing reliable, economic and environmentally friendly power supply. Historically, microgrids were associated with remote power grid that can operate independently from the larger grid—sometimes referred to as stand mode—is invaluable.

With the growing favourability of renewable generation sources, microgrids offer a more controllable, reliable and highly flexible solution to Britain’s fluctuating energy problem. Those looking at microgrid projects could benefit by looking outside of the traditional distribution management solutions, at platforms like zenon, that can better scale to suit these applications. Enhancing grid resilience, microgrids can help the main energy grid recover from system outages, either indirectly, by sustaining services needed by restoration crews, or directly, by helping to re-energise the microgrid.

Microgrids could empower the user, but what’s the benefit to the larger electricity grid? When the grid is in crisis, like Britain’s summer blackout, microgrids can help to react to unexpected demand peaks. That said, Summer 2018 may have provided a better example. Following Croatia’s 109th minute goal during the World Cup semi-final, it is safe to hypothesise that many England fans may have immediately flicked on the kettle to drown their sorrows in a good old brew. Or, perhaps more plausibly, simultaneously fired up thousands of the nation’s pub cash registers.

During this moment, the grid will suddenly experience a surge in power demand, but not necessarily a surge in power supply. If the supply isn’t available, that’s where microgrids can sell excess energy back to the grid. Sounds complicated, but microgrid software means it doesn’t have to be. COPA-DATA’s software platform, makes automated operation of microgrids easy. The local operator who is monitoring the microgrid would be able to provide excess energy during these periods of peak demand—balancing generation from intermittent renewable power sources with distributed, controllable generation and storage. Not to mention fulfilling England fans need for a little pick-me-up.

With the growing favourability of renewable generation sources, microgrids offer a more controllable, reliable and highly flexible solution to Britain’s fluctuating energy problem. Those looking at microgrid projects could benefit by looking outside of the traditional distribution management solutions, at platforms like zenon, that can better scale to suit these applications. Enhancing grid resilience, microgrids can help the main energy grid recover from system outages, either indirectly, by sustaining services needed by restoration crews, or directly, by helping to re-energise the microgrid.

Either way, microgrids will be the future, helping to keep Britain’s lights on in a cost effective, environmentally friendly way. www.copadata.com.
2020 CONSTRUCTION TRENDS: SMART FIFTH GENERATION DISTRICT HEATING

Matthew Trewhella, Managing Director of Kensa Contracting

The UK Government recently committed to a 2050 net zero carbon target in an effort to limit the worst effects of global warming. With the introduction of a Future Homes Standard mandating the end of fossil-fuel heating systems in all new build homes from 2025, house-builders, planning, and building control are in a prime position to encourage low carbon developments utilising eco-friendly building technologies and innovations in renewable technology to achieve our carbon ambitions.

LOWERING CARBON

The Future Homes Standard, effectively the follow-up to the "ban the gas boiler" announcement, sets out what we can expect from our buildings from 2025. And how we are going to get there is notably the "transitional arrangements" in the proposed Future Homes Standard, which could see an almost overnight ban on oil, LPG and electric as soon as mid 2022, under the Standard gas will get much harder and heat pumps many times easier to introduce into new-build homes. The proposed new SAP calculation is intended to allow assessment of the effects of the Future Homes Consultation proposed options. One of the headline grabbing proposals in SAP 10.1 is the proposed carbon factor for electricity at 0.136 – this will mean ground source heat pumps have carbon factors of 0.031 - 0.045 compared to a gas boiler at 0.23. Then there is a saving of more than 80% in carbon emissions just by switching heating to ground source heat pumps. With lots of councils across the country decarbonising climate emergency targets, many of which commit to carbon neutral targets ahead of the UK’s 2050 ambition, a growing number of new build developments are already embracing the low carbon approach.

In adherence to the recommendations of the Committee on Climate Change that homes should make use of low-carbon sources of heating, in particular electrically-powered heat pumps that produce no point-of-use emissions, and the new National Design Guide, which singles out ground source heat pumps and district heating systems as recommended heating technology, Bristol is witness to a number of new build schemes utilising this ultra-low carbon, non-air polluting, and low-cost heating solution to support its 2030 carbon neutral pledge.

1.33 new homes at Ashton Rise are being built by Bristol City Council using the high-efficiency Sig House solution, and heated by individual Kensa ground source heat pumps connected to a shared ground loop system. The installation would see each home making lifetime carbon savings of 30 tonnes compared to individual gas boilers, whilst also removing all local NOx emissions, ensuring local air quality is not impacted by the choice of heating system.

Across the city, a further 50 affordable homes are being constructed to Passivhaus standards by United Living in partnership with United Communities and the Bristol Community Land Trust. The energy efficient 'self-finish' properties will each feature a mini Kensa Shoebox ground source heat pump connected to an ambient shared ground loop array. Completing the low carbon ground source heat pumps will be a MVHR (mechanical vented heat recovery) system, making the homes even more energy efficient and further lowering fuel bills for the residents. The homes will be constructed using a single skin, Portonath block, cutting construction time and delivering improved thermal properties over an additional construction.

Solar PV panels further reduce costs, whilst supporting a green transport plan which features floor level parking charging points, a car share scheme and improved pedestrian and cycle access. Commuting to work around the homes is also being created with a dedicated and protected green corridor for biodiversity and wildlife including birds, bees and other insects.

Evidently the push by local planning authorities to place energy efficiency and carbon saving requirements on buildings that go beyond the requirements of the national building regulations is resulting in some ground-breaking ultra-low carbon, energy efficient developments.

Two notable examples are:
1. Bristol City Council require developers to reduce CO2 emissions by 20% and to follow a heat hierarchy that encourages renewable and low carbon heating.
2. The Greater London Authority requires developers to reduce CO2 emissions for new developments by 35% (10% must be from fabric energy savings) compared to current building regulations.

The Future Homes Standard consultation proposes reductions of 20% (option 1) or 31% (option 2) in CO2 emissions for all new dwellings, nationwide. However, it is also consulting on whether to remove the ability for local planning departments to impose deeper reductions via the planning process. This threatens the planning process being a major influence to impact CO2 emissions and achieve the UK’s zero carbon targets.

The London Energy Transformation Initiative (LETI) views the Standards proposal for Part L as a backward step in a climate where we need a huge leap forward, stating that local authorities will lose the ability to meet their climate emergency zero carbon commitments if they are stripped of their powers to go above and beyond the new Part L. Whilst the Future Homes Standard offers many significant highlights, the weight of lower carbon targets on buildings and the need for the UK to meet the low-carbon targets is troubling. Kensa has addressed these in its response to the consultation, which is currently under review.

GROUND SOURCE HEAT PUMPS

By connecting new developments to a fifth generation shared ground loop array feeding individual ground source heat pumps in each new home, householders are not only delivering a sustainable infrastructure to rival and replace the gas grid, they are providing a long-term low-cost low-carbon heating, and cooling solution. The rapid development and an increasingisation of the electricity grid and the high efficiency of ground source heat pumps now means that this route to the large scale electrification of the UK is showing significantly more promise than the decarbonisation of the gas grid. Let’s explore three innovations which coupled with ground source heat pumps will enable this rapid transformation to take place.

SMART CONTROLS

There is a slightly unfortunate trend towards calling anything that is climate-friendly ‘smart’. While it might be more convenient to program a thermostat using your phone/tablet rather than pressing buttons on the thermostat, it is hard to see why this deserves to be called ‘Smart’. For a system to be truly smart, it should perform optimisation autonomously – with minimal input from users.

If done correctly, the smart revolution could be the essential key to a lower carbon future. Management of the electrical grid with variable demands has never been simpler – consider the classic Coronation Street ending rush for the kettle. A further level of complexity is added by the variability of renewable generation supply from wind, solar, wave and tidal.

The traditional solution would be to build additional generating capacity to over-produce and then turn off when not needed. However, the stable source temperature of ground source heat pumps make them well suited to running when the grid can best support capacity.

If properly synchronised, smart control of millions of devices such as ground source heat pumps in each new property will allow householders to automatically take advantage of the grid to charge consumers different prices are lowest – our photovoltaic (PV) cells and thermal grid to function correctly without the need for over-generati

COOLING

Warmer summers, larger windows and urban heat islands are combining to increase the need for cooling, which is unethical in the fight against climate change.

Traditional air conditioning actually makes the situation worse because all the heat taken out of the buildings is pumped into the air around the city, exacerbating the need for cooling.

A ground array with an ambient temperature district heating loop makes an excellent source of cooling – the by-product of extracting heat from the ground all winter is a large area of pre-chilled ground which can be conveniently piped to each property (heat pump). Passive cooling can therefore be provided at the very low cost of running a small circulating pump. Even better, the heat that you take out of each property is reintroduced into the ground, which improves the heat pump heating efficiency the following winter.

For properties that need even more cooling, it is simple to reverse the heat pump hydraulic flows so that the heat pump actually cools the property and sends the waste heat into the ground.

PV-T PANELS

Solar panels that combine photovoltaic (PV) cells and thermal (T) water heat exchangers have been around for a while, yet their full potential can be realised by combining them with a ground array. In summer, the ground array cools the panels from 40°C down to 15°C which increases the efficiency of the photovoltaic panels by 15-25%. The heat taken from the panels is, via the ground array, re-deployed to heat the buildings, improving the efficiency of the heat pump by 10-20%. Combining three renewable technologies in this way is a win-win-win, which improves the efficiency of each technology independently and results in a more efficient overall system, bill reductions and carbon reductions.

TIMESCALES

These innovations all take advantage of existing technology but combine them in ways that bring huge benefits to the decarbonisation of our homes. They are ready to go and future proofed which means they can be deployed now with no regrets and their benefits will increase with time as the electricity grid evolves and decarbonises.

www.kensahheetpumps.com
THE HOMES ACT UPDATE: WHY TACKLING CONDENSATION IS MORE IMPORTANT THAN EVER

Following the introduction of the Homes (Fitness for Human Habitation) Act in 2018, increased pressure has been put on landlords to ensure their properties are adequately maintained. Condensation is a topic that continues to dominate the housing agenda, with misdiagnosis and tenant behaviour patterns negatively contributing to the problem. With this in mind, Paul Harrington at Elta Fans highlights the major issues surrounding condensation, and what landlords can do to tackle the problem.

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tatistically speaking, currently over 1/3 of UK households operate on a tenant-landlord relationship, with occupants reliant upon their landlords to fix issues within the property. The Homes Act seeks to ensure that rented properties are safe and healthy for habitation – in other words, free from things that could cause serious harm. As of March this year, this has been updated to include all rented properties, including those who have only just started renting.

In some instances, a tenant given greater power to action change, if they do not feel their property is maintained to a high enough standard, they can now take the matter to court. The court will then decide if it is fit for human habitation by considering matters which are set out in section 10 of the Landlord and Tenant Act 1985.

One of the most common issues that landlords have faced, especially during the colder months is condensation. This occurs when warm air collides with cold surfaces as windows or external walls, and as a result can lead to a type of mould that has damaging effects on both health and structural integrity. This issue is recognised by the NHS, who according to the Local Government Association, spends £2.5 billion a year treating people with illnesses directly linked to living in cold, damp conditions. Is it for this reason that landlords and contractors must get to grips with the causes and cures for condensation.

AVOIDING MISDIAGNOSIS

While being responsive is crucial, an all too frequent problem that both tenants and landlords run into is the misdiagnoses of condensation as dampness or mould. Not only does this not address the problem, but it can prove costly in time and expense as damp-oriented solutions are incorrectly invested in.

To help avoid misdiagnosis, landlords and tenants should avoid taking matters into their own hands and call on professionals. Damp experts should then be proactive when attending call outs and be able to correctly inform landlords on instances where it is condensation rather than damp, and recommend measures to alleviate the issue.

EFFECTIVE VENTILATION

In an ideal world, we could simply reduce the amount of condensation within our homes by controlling the amount of moisture inside them. However, in many circumstances this just isn’t possible, and alternative methods must be applied, such as the investment in effective ventilation. This must then be balanced with the need for energy efficiency, in order to prevent fuel poverty issues from worsening.

Intelligent PV units are designed to control condensation and gently ventilate the home. They are capable of adjusting air flow depending on the moisture content and temperature of incoming air during the winter months. This ensures optimal thermal comfort for tenants, without incurring the high energy costs associated with using a heater, and integral controls allow the unit to be responsive to the individual requirements of a home.

THE KEY CHANGES

It’s clear to see that the types of behaviour that increase instances of condensation are largely the same as they always have been. The Homes Act however, has understandably been a key change for landlords, who find themselves under more pressure to act and be responsive.

The spotlight has been shifted onto the housing providers, and therefore the conditions of their properties.

Everybody though, has a responsibility to understand the symptoms, causes, and treatments for condensation, whether they are a landlord, damp proofer, or anyone associated with dealing with ventilation to a home. To help with this, Elta Fans has created a guide to combating condensation, which can be found here: https://www.eltafans.com/divisions/residential/combatting-condensation/

Whether it is a storm, a flood or a general blackout, hospitals must be able to sustain power. To futureproof their standby power needs, hospitals often upgrade their standby generator systems. Here Jason Harryman, UK Sales and Business Development Manager for Electric Power at Finning UK & Ireland, exclusive distributor of Cat® generators in the UK and Ireland, explains why a generator’s power density matters to the NHS.

POWER DENSITY — CONSIDERATIONS FOR HOSPITALS

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uring a diesel generator upgrade, as part of a hospital refurbishment or expansion, it can be tough to meet the requirements of the space, particularly if the engine room is small or difficult to access. To achieve a good balance between power output and available space, hospital management teams can opt for generators with a high power density.

SPECIFYING A SYSTEM

Although the generator must be able to cover 100 per cent of hospital power in the case of an outage, futureproofing isn’t as simple as just buying bigger generators to meet extra capacity. If hospital teams over-size their system by choosing a generator with a higher rating than needed, the units will take up more space and have a higher maintenance and servicing requirement. Larger units also lead to increased capital costs, something which is increasingly hard to justify. At the same time, smaller units may not provide enough power, leaving hospital procurement teams with a tough decision.

Engine manufacturers have been working to decrease the size of their units, while maintaining the same power resilience. This leads to smaller units that have higher power density — a measurement for the amount of power a piece of equipment produces for its size. A standard hospital generator used to offer 2.5MW standby, convention now is usually above 3.0MW. One example is the Cat® 3516 which was originally rated at 1650kVA, but can now achieve over 3000kVA at a very similar footprint. Aside from power density, using compact generators means hospitals also benefit from the need for less ancillary equipment, as a generator that is smaller and cheaper to transport, instal and maintain.

POWER DENSITY IN PRACTICE

As an example, Finning has provided Guy’s Hospital in London with three Cat® C175-20 generator sets that, with a combined output of 3200kW, the highest output available from a single high-speed generator set in the UK. The system will go on to provide a combined 9600kW of reliable, mission critical standby power.

Talking about the project, David Porter, Head of Compliance at Guy’s and St Thomas’ NHS Foundation Trust said: “Due to the spatial constraints, we considered three different sizes of engines and appointed Finning, which offered the C175-20, because of its compact size and high power output. The small footprint of the C175-20 means that the new units can be housed within the existing generator rooms without any major building modifications.”

To reduce the risk of the power going out, hospitals may think that a more powerful generator means fewer units are required, and therefore fewer points of failure. However, demand for standby power has increased so significantly over the years, numbers have actually increased. The key to achieving a low cost of ownership is to optimise the generator to match the required needs. Hospitals don’t have to do this alone; for more information about the power solutions Finning provides, visit https://www. finning.com/en_GB/industries/electric- power-generator/healthcare.html


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27 ENERGY MANAGER MAGAZINE • MAY 2020
Bioenergy is recognised as a key renewable energy source and an essential component of a low carbon energy economy. According to the Committee on Climate Change, bioenergy could provide up to 15 per cent of the United Kingdom’s energy demand by 2050. Here, Alan Binning, Regional Manager at energy grid software provider, COPA-DATA, examines the potential of bioenergy generation and why, to integrate this valuable energy source into the smart grid, intelligent technology is essential.

In June 2019, the UK became the first major economy to set a legally binding commitment to reach net zero carbon emissions by 2050. The uptake of bioenergy generation, currently responsible for seven percent of energy demand, has contributed to the UK achieving the highest decarbonisation rate of all G20 countries, sitting at 3.7 per cent.

Unlike some renewables, bioenergy generation requires the use of biomass fuel to produce energy. That includes anything from food and agricultural waste to timber, plants and even sewage. The availability of biomass is a good and rapidly expanding with the advancement of new technologies, especially in terms of anaerobic digestion and food waste. However, this doesn’t mean bioenergy will be enough to be the sole generation of energy – it will be a key complimentary source to back up other types of renewable energy. But how can this energy source be integrated onto a grid designed for fossil fuel-based generation? Continuous depletion of primary fuel resources and concern about pollution means that uptake of renewable energy, including bioenergy, is essential. As a result, the development of smart grids has gained huge strategic significance.

Wind and solar power generation are undoubtedly two key players in the commitment to lower carbon emissions. However, the intermittent and fluctuating nature of these resources means that controlling and monitoring their output to the grid is a difficult task. Unlike wind and solar energy, which are dependent on weather and therefore volatile, power from bioenergy can provide a flexible method of integrating these renewable sources effortlessly into the grid. Bioenergy can be used to relieve the pressure on the system level management of the grid by making it more balanced, playing a focal role as a stabilising agent in renewable power supply.

Bioenergy generation can also be a key tool in reacting to energy trading; generating energy when it is in high demand. However, this is only possible with accurate data acquisition and monitoring.

Integrated, seamless information flows from bioenergy generation sites are critical success factors for implementing this source. Using a distributed software platform like zenon allows operators to paint a full picture of bioenergy generation; through control of the generation plant, constant monitoring of the data collected and the monitoring demand from the grid. Using the communication enabled by a platform like zenon means that the grid and its power sources can react to energy trading by identifying periods of high demand. It also allows for extensive asset distribution, generating a map of potential energy in storage, for example, and making that data available to all operators on the grid.

Not only a suitable system for the management of bioenergy generation, zenon is a unifying element that adds a layer of intelligence between systems on a smart grid. As well as connectivity, zenon also assumes control of the contextualisation of data, to make it useful and easy to evaluate. Through cloud connectivity, the system allows for secure distributed fleet management across multiple generation sites and locations, which can be configured and maintained from a central location.

Put simply, operators can make data-driven decisions, wherever they are. Bioenergy could provide the flexibility to balance the fluctuating characteristics of other renewable sources, like wind and solar power. Deployment and effective use of control technologies like zenon will only improve performance and operations of bioenergy sites, but will also allow the renewable energy source to continue to grow – further chipping away at the United Kingdom’s dependence on fossil-fuel based power. www.copadata.com

Solar power systems are considered a key tool in the energy supply for the present and future generations. Several factors have promoted the development of photovoltaics such as environmental concerns, incentives and tax deductions, a more performing and less expensive technology and the need to replace carbon fossil energy systems with renewables to ensure compliance with the objectives set by the Paris COP21 limit global warming to 1.5 °C.

A solar cell or photovoltaic cell is a device that converts the sunlight into usable energy. The amount of sunlight that can be converted into electricity is referred to as solar cell efficiency. There are some factors which should be taken into consideration when opting for solar panels to guarantee the optimal efficiency.

THE TEMPERATURE

The temperature influences the solar output because of the intrinsic characteristic of the semiconductor material. The efficiency of the solar panels increases when the temperature drops and decreases in high temperatures, as they lower the voltage across the cells.

ENERGY CONVERSION EFFICIENCY

The solar module has a different spectral response depending on the kind of the module. Therefore, the change of the spectral irradiance influences the energy generation. The energy conversion efficiency is increased by reducing the reflection of the incident light.

SOLAR SHADINGS

Solar PV panels are very sensitive to solar shading. Total or partial shading conditions have a significant impact on the capability of delivering energy and may induce lower output and power losses. Cells in a solar panel are usually connected in series to get higher voltage and therefore an appropriate production of electricity. But when shading occurs, this structure also has usage limitations. In fact, when a single solar cell is shaded, the current of all the units in the string is determined by the unit that produces the least current. When a cell is shaded, the whole series is virtually shaded too. To prevent the loss of energy, the installation usually includes bypass diodes. Bypass diodes are wired in parallel to the solar cells. When a solar cell is shaded, the bypass diode provides a current path that allows the string of connected solar cells to generate energy at a reduced voltage.

SOLAR SHADINGS

The installation of the photovoltaic modules must take into account some factors to take full advantage of solar radiation: the orientation, the inclination, the latitude of the place, the climatic conditions. The correct consideration of these variants will help ensure that they produce maximum energy by being exposed to the greatest intensity of solar radiation for the longest period of time.

ORIENTATION, INCLINATION, LATITUDE OF THE PLACE AND CLIMATIC CONDITIONS

The installation of the photovoltaic modules must take into account some factors to take full advantage of solar radiation: the orientation, the inclination, the latitude of the place, the climatic conditions. The correct consideration of these variants will help ensure that

OPERATION AND MONITORING

COPA-DATA services help with the management of the implementation of certain processes to avoid or mitigate potential hazards and to guarantee the optimal return on investment. Operations mainly consist of the remote monitoring and control of the PV power plant conditions and performance. Monitoring software provides access to all data collected, which can be used for correct purposes: defect detection, performance analysis, improvement, predictive maintenance, and security. A good monitoring system will provide information on the production, alarms and analytical data, in a timely, efficient and precise manner; to detect any anomaly of the PV plant.

MAINTENANCE

Solar panels are very durable; main warranties last for 15-25 years. However, cleaning solar panels is important to maximise the amount of light available to turn into electrical power. Making frequent physical inspections can help solar panel absorber to operate effectively.

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THE CLIMATE CAN’T WAIT.
SO WHAT’S THE SOLUTION?
THE CASE FOR 100% CARBON NEUTRAL GAS.

James White, sustainability executive at ClimateCare.

Green tariffs, centred around renewable electricity, have become commonplace within the energy sector. In 2019, renewable electricity provided more electricity to UK homes and businesses for the first time, surpassing all other forms of fossil fuel energy generation. Less than ten years ago, fossil fuel represented four fifths of the UK’s electricity generation.

As renewable electricity becomes the norm - organisations are turning their attention to another component of their energy supply, gas. Solutions for UK green gas or biomethane do exist, however, there are currently challenges to delivering this at the scale required to provide the UK with a 100% carbon neutral gas supply.

This article explores the current status of UK green gas, and the alternatives available to those yet to consider this as another component of their energy supply. Gas. Solutions for UK green gas or biomethane do exist, however, there are currently challenges to delivering this at the scale required to provide the UK with a 100% carbon neutral gas supply.

WHAT IS UK BASED GREEN GAS?

Emissions from the use of natural gas are the primary emissions source in residential and public sector, accounting for 20% of all carbon emissions in the UK in 2018. As a result, solutions are increasingly being explored to tackle this impact, including UK ‘Green Gas’. Green gas, or biomethane, is made through anaerobic digestion. This uses bacteria to break down organic materials – like food or farm waste – to release biogas. The biogas is purified and turned into biomethane, which is injected into the gas grid. Once in the grid, it’s piped into homes.

In contrast to natural gas, Biomethane is produced from renewable sources, like food and farm waste and is carbon neutral. Natural Gas re-introduces carbon dioxide (CO2) into the atmosphere that has been locked away for millions of years, whereas biomethane is produced from organic materials that absorbed carbon dioxide as they grew. This means that when it’s burned, it only releases that same amount of carbon dioxide.

In 2019 Green Gas supplied one million UK homes. This was a significant increase since 2017, with this anticipated to surge over the next three years to up to £400m of investment in the sector, according to the UK’s four main gas network operators. However, Green Gas through Biomethane represents just 4% of the UK’s annual demand for green gas.

Supply is not able to meet demand, and unfortunately bridging the gap will take significant time and resource. There is a clear need for an interim solution. And this is where carbon offsetting comes in.

WHAT IS CARBON OFFSETTING?

Carbon offsetting provides a means to mitigate the impact of emissions now, used by international Governments, businesses and NGOs (and recommended by the UN) many in the energy industry are now exploring how they can use carbon offsetting to compensate for their residual emissions.

Put simply, offsetting means compensating for your carbon footprint by funding an equal reduction in emissions elsewhere in the world. These emissions reductions are generated by projects around the world which achieve to internationally recognised and independently verified standards to ensure that the climate and social benefits they deliver are both tangible and additional.

HOW DOES CARBON OFFSETTING HELP THE PLANET?

Carbon Offsetting is a vital tool in tackling climate change, mitigating the impact of emissions we create, now, whilst we work towards reducing the emissions of our activities more completely. It provides a key means to help us in achieving our ambitions in relation to tackling climate change, helping us to bridge the time to the direct reductions that we need to make.

1. The Ambition Gap: Government ambition is falling short of what is required with regards to reducing emissions to meet the target of 1.5°C. Following the UN Climate Action Summit, critics noted that 14 high-emitting countries, covering 26 percent of global emissions, currently have no plans to submit new emissions targets ahead of the Paris Agreement coming into full effect next year.

2. Finance Gap: The UN’s Intergovernmental Panel on Climate Change (IPCC) says that an annual investment of $2.4 trillion is needed in the energy system alone until 2035 to limit temperature rise to below 1.5°C from pre-industrial levels. That is around 2.5% of the world’s economy. At present, “Neither the amount of financial flows nor their directness sufficient to keep temperatures below 2°C, let alone 1.5°C,” says Ottmar Edenhofer, former co-chair of the IPCC’s working group on mitigation of climate change.

3. Time Gap: There is a consensus that businesses and governments are not acting fast enough to tackle Climate Change. At COP24, United Nations Secretary-General Antonio Guterres stated that the world is “very close” in its plan to prevent catastrophic climate change, a point he reiterated at COP25. With COP26 currently delayed, climate ambitions are again pushed back, leaving less time to act. Offsetting provides a means to mitigate emissions now, buying us more time to tackle climate change through direct reductions.

The Global Carbon Project found that the total carbon dioxide emissions from fossil fuel and industry amounted to ~33 Gt of CO2 in 2019 (IEA, 2020), giving us less than 20 years before we exceed the target emissions for 1.5°C. Quite frankly, we are running out of time to tackle climate change through solely reducing our emissions.

Carbon offsetting is the only way to take responsibility for current emissions right now, whilst we work out other ways to bridge the time, investment and ambition gap currently being faced in the direct reduction of our emissions for high quality green products. This is a trend that we expect to continue, much as utilities suppliers have developed green electricity tariffs in the past.

CONCLUSION

Certainly, the future is full of challenges and of course, opportunities for the energy sector. The challenge will be to meet the need of the industry to decarbonise at scale, whilst tackling residual emissions now. All this, alongside creating an offering which captures the interest of consumers and reflects internationally recognised best practice.

There are several different approaches and strategies out there. In my opinion, understanding how best you can combine these for your organisation and to solidify a leading position within the industry, is something that we would encourage everyone within the industry to consider carefully. ClimateCare.org

James White develops high impact programmes for our new partners, based on our trademark Climate-Care approach. His focus is on harnessing the potential for the private sector to be a force for good by creating solutions that work for everyone: companies, communities and the environment. He is proud of the strong relationships he and his team have built across sectors to deliver their solutions, including projects in financial risk management, and James enjoys exploring the natural world on foot or by boat when he’s not at work.

REFERENCES:
FUTURE-PROOFING EV INFRASTRUCTURE

Andrew Toher, Head of Customer Insights Enel X UK

Conceptually, charging an electric vehicle is a simple task. In reality, providing the infrastructure to support e-mobility is giving energy managers a lot to think about. However, with the right approach, businesses can optimise their investment in charging infrastructure so that it works for them and their end users.

THE BUSINESS AND LEGISLATIVE DRIVERS

Transport accounts for around a quarter of global emissions. Consequently, many businesses are looking to lead on decarbonising their vehicle fleets and boosting EV use by providing workplace charging. The UK has passed legislation to ban sales of new petrol and diesel vehicles by 2035 at the latest, and is simultaneously looking to accelerate the EV market by providing attractive tax breaks to business users. Meanwhile, some businesses are looking to load on zero-emission transport as a tangible demonstration of their commitment to smart EV charging. However, this potent combination of e-mobility is giving energy managers a lot to think about. Businesses looking to invest in on-premise EV charging, it’s important that they consider the big-picture view of their EV fleet’s needs first, and consider both operational and procurement issues before rushing into projects.

Some of the key issues include: site capacity and load, choosing the right charger, taking a modular approach to design, identifying grid balancing opportunities and signing up to the right supply contract.

SITE CAPACITY AND LOAD

For many sites, considering the impact of adding EV charging stations will be involved in looking at worst-case power load scenarios to assess whether network upgrades are required, which can take many weeks and require significant investment. The business also has to pay to reinforce the network. The extent to which the customer has to pay for these connection costs is under review as part of the Access and Forward Looking Charges Review, and could be more onerous in future.

By monitoring the building’s energy consumption, the charging process can be remotely managed in real time while making the most of the existing available power. This approach can avoid the need for expensive network reinforcement, enabling optimal use of charging infrastructure while minimising costs through dynamic load balancing.

Supply contracts

Another consideration for businesses is whether they are signed up to the most appropriate supply for EV charging. Some energy suppliers are introducing innovative tariffs that are highly suited to smart EV charging. However, it may become more difficult to realise benefits from off-peak time-of-use tariffs as EV charging becomes the norm. Beyond simply agreeing to a bespoke tariff for energy use, businesses can also choose how their power is generated: use of ‘green’ tariffs, the pricing/payment/billing model, financing for the new assets and on-site generation; resilience measures; the use of energy management technology and their own distributed assets for generation; demand response and energy storage.

Supply contracts

Rather than taking a one-size-fits-all approach, it is necessary to consider the needs of users and the potential business models when specifying charging solutions for public and private infrastructure. For example, a 50kW fast charger may be too fast for a shopping centre or a business park, where visitors are expected to stay on-site for a number of hours. A retail park, pub or motorway service station will have different business requirements that are met by different charging solutions. Some operators of public charging infrastructure earn revenue by renting parking spaces from the site owner for a fixed annual fee, while the site owner benefits from an additional customer amenity and, in some cases, a share of the charging revenue. Optimising revenue and return on investment requires careful choice of the charging solution to offer, i.e. the right charging solution for the right time to achieve best customer experience and best return on investment.

MODULAR PLANNING

Balancing the needs of users with a design that satisfies those needs will be challenging for any business committing to providing EV infrastructure for employees. There are many variables at play, including the rate of uptake of e-mobility, EV battery range, technology advances and new assets; onsite/offsite generation; payment/billing model; financing for the new assets; on-site generation; resilience measures; the use of energy management technology and their own distributed assets for generation; demand response and energy storage.

GRID BALANCING

Whether businesses can usefully use their EV fleets as energy storage assets or virtual power plants to help balance the grid is still some way off. Using EVs for energy storage requires vehicle-to-grid (V2G) technology and the ability to discharge the car’s battery to the grid. Despite successful proof-of-concept V2G trials, there are some practical barriers to implementing V2G today, foremost of which is limited EV manufacturer support for bidirectional charging.

PLANNING FOR THE FUTURE

Workplace EV charging infrastructure will become prevalent in the coming years, as businesses look to enable e-mobility. By taking a holistic view of energy use and planning for the future, businesses can embrace zero-emission transport without later regretting investment decisions they might make today.
CHARGING AHEAD ON THE ROAD TO ZERO EMISSIONS

Richard Baker, CEO of GeoSpock

The UK transport sector contributes more to carbon emissions than any other. It is therefore no surprise that the government is encouraging more people to switch to electric vehicles (EVs). In February, the UK government brought forward their ban on new petrol, diesel or hybrid cars from 2040 to 2035, helping the way for greater adoption of hybrids and EVs that run on cleaner energy.

However, it is not that simple – the EV transition strategy lacks a few crucial pieces. Deloitte has estimated that the global EV market will reach a tipping point by 2022, when the cost of ownership of an electric vehicle will be on par with the internal combustion engine (ICE). Unfortunately, it could also result in a supply gap of almost 14 million EVs in 2030, undermining government efforts.

The aim is clear – moving toward the electrification of the private and public road transport sectors. However, there’s still a long way to go and many things to consider.

COMPLEXITIES OF A NATIONAL CHARGING INFRASTRUCTURE

In January 2020, a new Ipsos Global study revealed that consumers ranked the location and availability of charging stations as one of the biggest barriers to EV adoption. To address this, the Conservative government made a £500m 100,000 election commitment to expand the “fast-charging” network. This could lead to a substantial improvement from the 15,500 chargers (26,500 plugs) which are present, according to Zapmap. However, compare this to the 8,400 fuel stations and 68,000 pumps currently in the UK, and we have a better understanding of the current situation. If we accept that the number of charging stations has to increase, and that the government is reacting, we must consider their location. Choosing the best sites are complex due to competing factors such as local grid constraints and EV ownership density. Unlike traditional refilling at petrol stations, it’s not a one-size-fits-all system. The type of charge point best suited to each location will depend on the profile of each area and the driving habits of EV users within it.

The wide range of charging speeds, and potentially long recharge times, means EV charging infrastructure needs to fit alongside existing driving behaviours and activities. If, for example, the majority of EV drivers prefer to charge up their vehicles while they do Saturday’s shopping in a particular district, then that is vital data for charge point locations.

CHARGE POINTS AS DATA GOLDMINE

Operational data on charging – such as time of day, charge duration, the amount of power delivered and what type of connector was used – is now collected in combination with commercial data related to payment methods and transaction amounts. In addition, modern EVs are far more digitally enabled than traditional vehicles, constantly recording high volumes of additional spatial data during the day.

Taking into account all the different variables makes it a delicate balancing act to decide what the demands are for drivers – whether visiting any given neighbourhood shopping centre or central business district car park now, or in the future. That’s where the power of geospatial data will help. This can highlight unique usage patterns in specific areas and shed light on which is the best route to take when it comes to EV infrastructure investment. Once you have a clear picture of charging use and behaviour, in a particular location, you can remove a lot of the guesswork from charging infrastructure decisions.

THE “OVERPOWERED” ELEPHANT IN THE ROOM

We are in the energy age – every nation is looking to fill the void left by fossil fuels and make efficient, future-proof decisions. As EVs become more widespread, electrical demand will grow and, on current estimations, outstrip the capacity of local power grids. This in turn will force EV charging networks to compete with each other in infrastructure projects for electricity.

There is also concern over electricity public transport. UK buses and trains are due a complete overhaul, purely from an efficiency standpoint. Factor in electrification, and the public transport network needs huge and ongoing investment if it is to meet modern and future demands.

The UK government has set bold and welcome plans for EVs. It is the first step in making the UK transport industry fit for purpose. However, simply banning or phasing out old, inefficient vehicles and expecting private companies to develop new technology to fit the void will not suffice.

We need to make decisions that will benefit us, not just for the here and now, but for the unforeseeable future. Building charging points is to be lauded, but what happens if the technology is made redundant, or if public habits change? Instead, the government must look to invest in data, creating a holistic transport hub to understand activity and trends.

Only then can we make informed, real-time decisions and ensure the national move to electrification is moving forward in the most efficient and flexible way possible. https://geospock.com/en

THESE ARE THE CITIES MOST PREPARED FOR THE ELECTRIC CAR TAKEOVER

• The Government announced plans to ban the sale of conventional vehicles by 2035, Brits remain dubious about switching to electric cars
• Study reveals how well UK cities were prepared as of 2019

As the government announced that they will be bringing forward the plan to ban the sale of conventionally powered vehicles by 2035, new research has revealed the UK could miss its target of most vehicles on the road being low emission, as early as 2034, however, Brits have major concerns about making the switch. The research from leading car parts retailer, Euro Car Parts, says: “It’s interesting to see that while figures suggest the government are on track to hit their low emission vehicle target, perhaps even earlier than anticipated, the nation’s views and attitudes towards alternative fuel vehicles, means we still have a long way to go. It seems the biggest concern is the number of charging points and it’s understandable why. If the YoY figures are anything to go by, we simply won’t be equipped to supply the demand, however it’s encouraging the government is increasing its funding for charging points in residential areas. Hopefully seeing more around the country will inspire the nation’s drivers to make the switch and help us to achieve the initiative as early as predicted.”

For more information on how prepared the UK’s major cities are for the electric takeover, please visit: https://www.eurocarparts.com/blog/the-uk-cities-most-prepared-for-the-electric-car-takeover

Looking at the UK as a whole, a Department for Transport report in 2018 stated only 2% of registered vehicles were low emission. And while this seems a long way off target, the YoY growth has revealed the UK has a 37% increase in low emission cars since 2016. If it continues at this rate, the UK will have 38.2m low emission vehicles on the road by 2034, leaving the government hitting its target an impressive 16 years before its 2050 deadline.

Despite the target already predicted to be hit earlier than anticipated, Euro Car Parts’ research revealed the nation’s drivers aren’t quite ready to take the plunge.

The research with 2,000 UK drivers highlighted ‘not enough charging points’ and ‘being stranded without charge or accessibility to charging services’ were their main concerns (64%), and according to YouGov’s, only 4% would consider purchasing an electric car as their next vehicle. Looking further into the volume for charging points, the UK has seen an average of 28% increase in charging points being installed YoY since 2016. If this rate continues, the UK is expected to have 322 public charging points per 10,000 low emission vehicles by 2034, suggesting the UK’s roads won’t be fully equipped for the transition, and may not meet day-to-day demand. The number of charging points weren’t the only concern, with the distance-per-charge a worry for half of motorists (47%), as well as their electricity bills increasing (27%) and it actually being more costly than owning a petrol/diesel vehicle (22%).

Commenting on the findings, Chris Barella, Digital Services Director at Euro Car Parts, says: “It’s interesting to see that while figures suggest the government are on track to hit their low emission vehicle target, perhaps even earlier than anticipated, the nation’s views and attitudes towards alternative fuel vehicles, means we still have a long way to go. It seems the biggest concern is the number of charging points and it’s understandable why. If the YoY figures are anything to go by, we simply won’t be equipped to supply the demand, however it’s encouraging the government is increasing its funding for charging points in residential areas. Hopefully seeing more around the country will inspire the nation’s drivers to make the switch and help us to achieve the initiative as early as predicted.”

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ARE BUILDING CERTIFICATIONS ‘GREENWASHING’ THE ENERGY-EFFICIENCY INDUSTRY?

With so many industry buzzwords and certifications, it's increasingly hard for people to distinguish between what are, and are not, relevant environmental credentials.

We are all aware of the buzzwords. There are green and healthy buildings, zero-carbon buildings and the Living Building Challenge, which are backed up by certifications such as LEED, BREEAM, GRESB, ISO50001 and WELL.

While these green strategies have their origin in well-meaning environmental causes, a certain ‘Greenwashing’ has muddied the waters. The term greenwashing was coined in the 1980s in response to companies making bold claims about their environmental credentials.

Over 30 years later, the phrase is back, but this time greenwashing has become a lot more convincing due to the amount of green policies which a company can pretend to adopt. Also, people are more ready to spend a premium on green products in order to support mainstream concerns for the environment.

Now, this false message of selling a green product or service has predominantly migrated into commercial buildings. These attributes range from the material ingredients and toxicity to identifying material extraction damage to local eco-structures and the environment, to the actual performance of the building itself regarding energy and water consumption.

With 600 rating tools available, it's not only daunting to quantify what these mean, it's also more possible than ever to be misled by ambiguity in the industry. Certainly, some companies are investing in Energy Monitoring Solutions as a tick-boxing exercise to achieve an energy efficiency standard mostly in the construction stage of a building. Most certifications will have a minimum requirement of monitoring main energy and water meters and additional points can be achieved from metering at sub-distribution boards.

Some of the key benefits include:
- Ability to calculate, track and report energy consumption.
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- Identifying significant energy users and much to gain!

www.energymanagermagazine.co.uk/ energy-awards-2020/
ENERGY-AS-A-SERVICE: ENABLING UK MANUFACTURERS TO TURN REGULATORY COSTS INTO COMPETITIVE ADVANTAGE

Mark Kelly, Project Development Director, Distributed Energy Systems (DES), Siemens and Mark McLoughlin, Key Account Manager - Siemens Industries and Markets, Siemens Financial Services (UK) examine how smart financing is enabling manufacturers to harness energy savings to make them more competitive.

The manufacturing industry is under pressure to lower carbon emissions by reducing its energy use. Since business and industry is responsible for around 25% of the UK’s carbon emissions, this has led to the introduction of a swathe of legislation, designed to make organisations manage their energy consumption more sustainably. At the same time, rising energy prices are increasing production costs. These regulatory and financial pressures are even more urgent as shareholdes are increasingly aware of how fuel costs, network costs and poor energy purchasing decisions are harming their investments.

In addition, UK businesses without an energy resilience strategy are said to be risking up to 17% of their revenue, and yet one third of energy decision-makers say their organisation is not prepared for a disruption to their energy supply from a temporary grid failure.

To ensure businesses maximise the potential competitiveness benefits from meeting their regulatory obligations and financial demands, it is vital that they fully understand their responsibilities and how to manage them most effectively.

Although many manufacturers have already built up their own in-house energy management expertise, partnering with dedicated energy solution providers can secure better financial and strategic outcomes and allow them to focus on their core competencies.

Strategically-sound suppliers are prepared to take a long-term and evolving view of what energy solution best meets each industrial manufacturer's unique needs, using a holistic, integrated, site-specific approach.

Partnered with an outside expert, businesses are shifting towards generating their own heat and power to bring energy production closer to its use. This enables manufacturers to cut energy wasted from transporting electricity from one side of the country to the other. Excess energy is captured and re-used, while production line processes are adjusted to optimise energy efficiency.

An integrated on-site energy supply solution can immediately reduce operating costs, reduce utility negotiating power, and provide a more secure, resilient energy supply. Overall, through a mix of flexible, decentralised and renewable energy generation strategies, a trusted partner can help businesses reduce energy costs by 25-40%.

Energy service partners can also enable industrial manufacturers to access new digital tools such as data analytics to drive down their energy use. For instance, building a ‘digital twin’ – an exact virtual replica – of a manufacturing facility, allows solutions to be tailored to each specific site and organisational energy objectives, covering factors such as the demand for electricity, steam, and hot water.

Despite the immediate benefits of an integrated energy solution, a substantial number of industrial energy users may be hesitant to risk capital on a non-core part of their business. Expert providers, however, have the knowledge, experience and expertise to offer ‘outcome-based’ financing arrangements which are effectively self-funding and require no up-front capital expenditure.

Siemens Financial Services conservatively estimates that UK manufacturers could save £5.6 billion over five years, including £95m in savings for the chemical manufacturing sector, by implementing Energy-as-a-Service solutions.

Through Energy-as-a-Service arrangements, manufacturers can secure these operational cost reductions without putting pressure on capital resources. Instead, the manufacturer is charged a monthly fee that is structured to effectively deliver a net operational benefit, based on projected energy savings from solutions which optimise their energy use. In this way, manufacturing CFOs make payments based on outcomes – including energy savings, carbon reductions and resilience against disruptive power outages.

Prioritising capital investment in energy optimisation is challenging for most manufacturers, competing with many other demands on scarce funds. By being able to access Energy-as-a-Service solutions, a growing wave of manufacturing CFOs can access new investments right away to reduce their operational costs and improve their competitiveness. On the other hand, if companies simply sit back and wait for the dust to clear, they will miss out on the savings available and lose out to competitors.

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