

Issue 9 | December 2025

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TURN TO PAGE 11 FOR FULL STORY



TOOL THEFT – GUARDING THE GRID

Page 14

**HOW UK BUSINESSES CAN HELP TRAIN
AN ARMY OF SOLAR INSTALLERS**

Page 26

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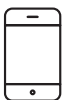
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Welcome to the December issue of Renewable Energy Installer & Specifier (REI) magazine

It's been quite a year for the REI team. We've loved meeting so many of you and in particular, understanding your businesses, goals and drivers even more. We're always keen to meet up, gather your feedback and, of course, work with you on any future projects.



Meanwhile, this issue contains a wide selection of news, opinion pieces and technical features. We have a very interesting story on how UK businesses can help train an army of solar installers – turn to page 26 for full details.

If you'd like to get in touch with any of the team members, please see contact details below:

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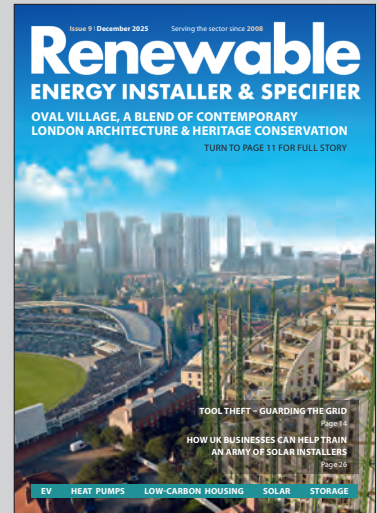
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I hope you enjoy reading our first issue and I look forward to hearing all your feedback.

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CONTENTS

NEWS

- 05 Industry News
- 08 OFTEC - National Audit Office Report
- 09 MCS Annual Conference

CASE STUDIES

- 11 Most complex brownfield regeneration project
- 12 A Net-Zero first for a UK hotel



FEATURES

- 14 Tool Theft – guarding the grid
- 16 The solar skills shortage

FUTURE HOMES STANDARD

- 18 What does the Future Homes Standard mean for electrical installers?
- 20 Low carbon living
- 22 From rooftop to grid

OPINION

- 24 New evidence sets the roadmap for a decarbonised heat market in the UK

INTERNATIONAL

- 26 How UK businesses can help train an army of solar installers

INNOVATION ZONE

- 30 A guide to what's new for renewables



Centrica to open new £35m Net-Zero training academy in Leicestershire

Centrica announced the development of a new £35m state of the art training academy and energy transition research laboratory in Lutterworth, Leicestershire, which will open in May 2026.

Centrica Energy Park will see thousands of engineers trained each year in the skills necessary to drive the energy transition including heat pumps, EV chargers, solar panels and battery storage.

Centrica, owner of British Gas, Hive, and Bord Gais Energy sees the academy as a key investment in the skills of its 7,000-strong engineer workforce and in the creation of new green jobs in the UK and Ireland.

The academy will have a full size “eco house” to demonstrate how all of the skills and capabilities of Centrica’s workforce come together to deliver the home of the future.

Additionally, the academy will be home to the following research laboratories:

- **Net-Zero Lab:** This facility will be used to test existing and emerging Net-Zero Energy & Heating Technologies.
- **Diagnostic & Innovation Lab:** This multi-purpose lab provides business support to British Gas’ engineers and develops bespoke tools and equipment.



- **Smart Testing Lab:** The Smart Testing Lab will provide a controlled environment to develop, test and support new and existing smart metering technologies.
- **Centrica Business Solutions Controls Lab:** This lab will be used to develop and test controls systems for commercial and industrial energy and heating solutions.
- **Hive Lab:** The Hive Lab is set to support the development, testing and quality assurance

of new and existing Hive Home products, including EV Chargers.

Centrica’s new training academy will officially open and welcome engineers from May 2026. The existing Leicester Academy will be integrated into the new facility as part of the transition. The new facility will be 40% larger than the existing British Gas academy in Leicester, allowing for increased training capacity

Revamping of seven solar plants in Puglia

EF Solare Italia, a photovoltaic operator in Italy and across Europe, announces a new photovoltaic revamping project to upgrade seven photovoltaic plants located in the province

of Brindisi, Puglia, with a total installed capacity exceeding 6.4 MWp.

The project includes the replacement of the existing inverters with 59 next-generation FIMER units. All plants are equipped with

single-axis trackers to maximize efficiency. Moreover, a sequential regeneration approach has been applied to oil transformers to extend their lifespan and enable sustainable reuse of existing components. To date, four out of the seven plants have already been reconnected to the grid, with full completion expected by the end of the year.

This project highlights the shared commitment of EF Solare Italia and FIMER to advancing sustainable, high-performance solar energy. It is a concrete example of the joint strategy between the two companies to enhance local communities, optimize renewable energy production, and contribute to Italian national decarbonization goals.



Promotion within OFTEC

OFTEC has announced the promotion of Malcolm Farrow to Director of Marketing and External Affairs as part of its long-term commitment to driving the off-grid sector's transition to renewable liquid fuels in support of the UK's decarbonisation strategy.

In his expanded role, Malcolm will oversee OFTEC's public affairs and political engagement activity across the UK, working closely with OFTEC's Ireland team across the Republic of Ireland and Northern Ireland.

His focus will be continuing to work with the government on implementing practical and affordable low carbon solutions for off-grid homes and businesses through a technology neutral approach, which recognises both the role of heat pumps and renewable liquid fuels.

Malcolm Farrow has been a central figure at OFTEC for fourteen years, most recently as Head of Public Affairs, where he has successfully highlighted the challenges and costs off-grid homes will face if they are forced to transition onto heat pumps and the need to encourage alternative solutions.

In his new role, he will continue to proactively engage with ministers, MPs, OFTEC members, technicians and consumers to promote a fairer transition to Net Zero.

Prior to joining OFTEC, Malcolm built a career in corporate communications and external relations in the conservation and public sectors. This focus on stakeholder engagement and policy development has been central to translating OFTEC's technical and regulatory expertise into actionable policy solutions.

Following the announcement, Malcolm Farrow commented: "I'm pleased to take on this expanded role in OFTEC's leadership team at a critical time for the sector. Whilst we have seen positive progress in the government's recognition of the unique challenges facing the off-grid sector, we must not rest on our laurels. I'll be working closely with my OFTEC colleagues, our members and industry partners to continue to make the case to secure a truly technology neutral approach.

"More than ever, off-grid consumers need affordable and hassle-free low carbon solutions in the current cost of living crisis. The government



Paul Rose, OFTEC CEO (left), with Malcolm Farrow, Director of Marketing and External Affairs (right)

also needs to balance its own budget as it tries to keep public spending under control.

"That's why renewable liquid fuels are so vital. They offer an instant carbon reduction with minimal upfront cost for consumers. In my new expanded role, I will continue to work proactively with all parties to secure the long-term support needed to make this transition a reality for off-grid communities."

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Local Power for Local Care: Coed-Ely Solar Farm now powering Royal Glamorgan Hospital

The Coed-Ely Solar Farm is now officially switched on and supplying electricity directly to the Royal Glamorgan Hospital. This means that one of their most vital public services is being powered by energy generated right here in our community.

Built on a reclaimed colliery site, the solar farm features 9,000 panels and produces enough electricity to power around 1,800 homes each year, and as well as powering homes, that energy is helping keep the lights on, machines running, and care flowing at the Royal Glamorgan Hospital.

Further to this, the project has created local jobs and generated over £600,000 in spending with local businesses and suppliers. It's a major step forward in making vital public services more resilient and less dependent on unpredictable energy markets.

The Coed-Ely Solar Farm was jointly funded by Rhondda Cynon Taf County Borough Council, the UK Government through the UK Shared

Prosperity Fund (UKSPF), and part-funded by the Welsh Government.

Councillor Ros Davis, Cabinet Member for Resources said: "This milestone sees all the hard work pay off as the Royal Glamorgan Hospital receives its first boost of power from the Coed-Ely Solar Farm. This ambitious project is providing a unique opportunity to deliver energy for the benefit of our communities.

The Coed-Ely Solar Farm was constructed on a reclaimed colliery site, turning 84 acres of former industrial land into a renewable energy asset for the region. As one of the largest local-authority solar projects in Wales, it generates enough clean energy to power around 8,000 homes annually while contributing 5MW to the grid.

Claire Thompson, Executive Director of Strategy and Transformation, said, "This is a landmark moment for our health board and for the Royal Glamorgan Hospital. The switch-on of solar energy is more than just a technical achievement

- it's a symbol of our commitment to delivering healthcare in a sustainable, forward-thinking way.

"We're proud to be part of a project that not only reduces our carbon footprint but also strengthens our partnership with Rhondda Cynon Taf Council and Vital Energi. This is just the beginning of our journey toward a greener future.

"A heartfelt thank you to all our colleagues whose dedication and hard work made this milestone possible."

Matt Ace, Regional Director, for Stantec in Wales, added: "This aspirational project required careful and extensive insight around solar design and power delivery as well as complex geological investigations and reliable economic modelling. We are proud to have been part of an incredibly collaborative and forward-thinking project team. We believe this scheme demonstrates what can be achieved when public and private partners share resilience, efficiency, and innovation as common goals."



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National Audit Office report

Malcolm Farrow, Director of Marketing and External Affairs OFTEC addresses the recent National Audit Office report on problems with insulation installations.

The recent report on problems with insulation installations under the Energy Company Obligation has rightly sent shock waves through the retrofit sector. While the report focussed on the many failings with wall insulation, the Government Minister's response signalled that a wider review is necessary, including low carbon heating, and that fundamental reforms will be made.

In his response, the Minister, Martin McClusky, described a fragmented system, with weak oversight and too many organisations, often with overlapping roles and responsibilities, which hampered the ability of consumers to obtain redress when work is defective.

Consumer confidence is essential so everyone committed to the energy efficiency and decarbonisation mission should welcome this review. However, the devil will be in the detail so we must await further details, which are promised when the Warm Homes Plan is eventually published.

Retrofit System Reform Advisory Panel

One concerning aspect of the Minister's response is the makeup of the Retrofit System Reform Advisory Panel, which DESNZ has tasked with developing the proposals. Despite the remit of the review including retrofit standards, the accreditation of installers, compliance with standards, oversight and enforcement, quality assurance systems, consumer protection and skills, none of the current certification bodies are included in the panel. This makes no sense – the certification bodies will clearly have a keen understanding of where the current system is failing and how to improve it - and OFTEC has written to the Minister emphasising this point.

While the focus has been on the poor installations and the flaws of the oversight and



protection system, it's perhaps surprising that there appears to have been little discussion about whether the design of government support schemes is also contributing to these problems. Of course, the two are not separate issues, they are interconnected, and the design of the one will impact on the successful delivery of the other.

Governments fail to engage

Successive governments have repeatedly failed to engage with and listen to the views of the small local installation companies that make up the backbone of our industry. These businesses frequently cite the onerous hoops they are required to jump through as barriers preventing them getting involved with government-funded work. Has this contributed to some of the quality issues we're seeing? It seems obvious that the answer must be yes.

Small installation companies and sole traders take pride in serving their local communities. They build long-standing relationships with their customers, trading on their hard-won reputations for quality work. This should make them the perfect vehicle for the deployment of renewable heating systems and the trusted advice householders need. But instead, we have funding schemes welded to overcomplicated quality frameworks, which seem more suited to fly-by-night installation companies that rely on sub-contracted labour - companies that the customer will likely never see again. It should be obvious to all involved that this is not an ideal model for ensuring high quality outcomes, and if the review can fix this problem, it will be a big step forward for the future of our sector.

www.oftec.org



The people behind the standards

Inside the MCS Annual Working Group Conference, by Lucy McKenzie, Head of Technical at MCS, who reflects on the day.

MCS (Microgeneration Certification Scheme) is the UK's quality mark for small-scale renewable technology such as solar panels and heat pumps. Its standards define how small-scale renewables are tested, designed, and installed, and are created in collaboration with dedicated Technical Working Groups.

On Tuesday 4 November, MCS held the 2025 Annual Working Group Conference at the British Library, which brought together members of the Technical Working Groups for a series of panels and discussions.

The MCS Technical Working Groups are made up of around 250 independent experts from across the industry. These include installers, manufacturers, trade organisations, certification bodies, consumer groups, educators, and independent specialists. There are nine distinct Technical Working Groups, each focused on a different technology within MCS's scope.

Our Technical Working Groups meet regularly to discuss key industry issues and ensure that MCS Standards are created by industry, for industry.

The Annual Working Group Conference is organised by MCS to bring together members from all our Technical Working Groups, to provide an opportunity to learn from each other and identify areas for future collaboration.

Discussions led by experts

Throughout the day, the Technical and Standards team at MCS chaired dedicated discussions on the work accomplished by the members this year. This included:

- Experts from The MCS Foundation spoke about the relationship between policy and clean energy, and the evolving political discourse on net-zero.
- I hosted a panel with industry representatives about the challenges regarding fire safety in solar PV systems and the work MCS is involved in to tackle them.
- An interactive session reflecting on the progress made in 2025 and gathering feedback from the working group members on what they want to see in 2026. This gave members the chance to learn more about the newest members of our technical team
- A spotlight on how and why the new Thermal Energy Storage Systems (TESS) Standard was developed by Tom Lowe, former chair of the TESS Working Group.

The conference concluded with a keynote speech from Martin McCluskey MP, Minister for Energy Consumers, who spoke about the upcoming policy developments that will directly impact the sector. Looking ahead to 2026 and beyond, we will expect to see the Future Homes Standard mandate solar

panels on new homes, and £13.2 billion set aside for the Warm Homes Plan, which will tackle fuel poverty and energy efficiency in UK homes; with small-scale renewables set to play a key role.

Get involved

Every year, we look forward to the Working Group Conference as a way of bringing together our community and providing people with the opportunity to meet each other – particularly those from other working groups – as well as our team. It also gave us a chance to showcase our progress across the different working groups.

Ultimately, MCS Standards are crucial to our mission of giving everyone confidence in home-grown energy, as they define how small-scale renewables should be tested, designed, and installed.

If you are interested in becoming a member of one of our Technical Working Groups and having your voice heard in the creation of our standards, you can email our team at meetings@mcscertified.com.

www.mcscertified.com/who-we-are/mcs-standards/mcs-working-groups/

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Most complex brownfield regeneration project

Howzat: Power On adopts utilities networks & heat centre on prestigious multi-utility project at the Oval

Power On, a multi-utilities connections provider for high rise and complex projects, has adopted the utilities networks and heat centre for a 1,374-home development overlooking The Oval cricket ground.

One of Berkeley's most ambitious and complex brownfield regeneration projects, Power On is delivering the electric, water, gas and, vitally, low-carbon heat and cooling, for the new residential and commercial area. The contract has now been signed for Power On to also officially adopt these systems, running and maintaining them in perpetuity.

Landmark complexity

Oval Village is a blend of contemporary London architecture and heritage conservation, comprising seven blocks of residential apartments with amenities including private gardens and a swimming pool. A key part of the project is the carefully restored 145-year-old Grade II Listed gasholder, a local landmark overlooking the world-famous Oval cricket ground, which now accommodates a block of over 200 apartments, known as The Halo.

Neil Fitzsimons, Managing Director of Power On, said: "This is a major heat and utilities project for high-rise central London. It is a prestigious but also complex site and we are delighted to have been selected by Berkeley Group for the job."

Multifaceted heat network

The Heating Network for Oval Village is a complex system comprising of a four-pipe heating and cooling Air Source Heat Pump (ASHP) located on the roof of Block B, The Pinnacle, which will maintain a water circuit temperature of 45°C. The ASHP will then be connected to three water source secondary heat pumps, located in the basement Energy Centre, which will further boost the water temperature to 70°C. Additionally, five thermal store buffer vessels with a 35m³ total capacity will be installed to allow for flexibility, which will maximise network efficiency and ensure it is cost effective. Gas boilers have been installed as a top-up option for peak demand times in winter, but Power On's design team have managed to reduce these from an initial three, to two.

Remarkably, the ASHP is reversible and can not only provide heating capacity of 603kW in cooler times but also cooling capacity of 716kW in the summer, a vital option for high-rise living today.

Connection fundamentals

A temporary energy centre has been provided for the initial blocks and this will later be connected to the main, permanent energy centre once completed, with Power On adopting both. All seven of the blocks will be fed heat from this system through a network of pipes.

Block B, The Pinnacle, has been the starting and pivotal point for the whole development. This is where Power On brought in the main utility supplies. The basement substations of Block B comprise a 20KV electricity network, far higher than the standard 11KV. This has been fed from the Bankside UKPN primary station, involving lengthy offsite work across London from the Tate Modern. Housing the plant in the basement was a bespoke procedure with a great number of safety and building regulations to be met.

Liaising with all parties

This ambitious development involves the collaboration of parties including the London Borough of Lambeth, Historic England, Surrey County Cricket Club, and local residents. Power On took responsibility for the whole project, liaising with all parties and managing any changes and additional requirements. To simplify the process, Power On maintained one point of contact throughout, for all four utilities.

Paul Vallone, Chairman, Berkeley (Central London) Ltd, said: "Power On have made the multi-utilities aspect of the project straightforward. Having a single, multi-utilities provider has created one clear line of communication, which offered a broader perspective and enabling any challenges to be resolved quickly and efficiently."

A Net-Zero first for a UK hotel

Sun-Powered Hospitality: Vertical solar façade powers Zeal Hotels' Net-Zero vision at Exeter Science Park

ZEAL Hotels has opened the first in a planned series of net-zero hotels, designed to operate entirely on renewable energy. The 142-bedroom voco Zeal Exeter Science Park is believed to be the first hotel in the UK to feature solar panels as cladding, with vertical solar arrays installed on three of its four exterior walls. This innovative solution is complemented by a smaller rooftop solar system, making the building almost completely encased in solar technology.

Developed by Zeal Hotels in partnership with IHG Hotels & Resorts and Valor Hospitality, the hotel has earned a BREEAM Outstanding rating in recognition of its sustainable design and construction. This includes the use of Passivhaus principles to reduce energy consumption by approximately two-thirds compared to conventional hotel buildings. Among the key design features are a specialised wall thickness and concrete composition to help maintain stable and comfortable indoor temperatures and reduce reliance on traditional heating and cooling systems.



A visually striking feature

At the heart of the hotel's innovative design is the wrap-around vertical solar panel façade. Black glass solar panels are seamlessly integrated into the building's architecture, serving not only as a means to maximise on-site energy production but also as a bold, visually striking feature that enhances and complements the hotel's sleek, contemporary aesthetic. Behind the design lies a robust commercial strategy. The solar system is projected to generate approximately 320,000 kWh of clean, renewable electricity each year – more than the building's total annual energy consumption – and offset approximately 202 tonnes of CO2 emissions annually. From a financial standpoint, it is forecast to deliver an estimated £200,000 in annual cost savings, with a return on investment anticipated within just 18 months of operation.

Nick Spicer, managing director of solar specialist Your Eco, which installed and commissioned the vertical solar system, explains: "While the original plans for the hotel included a rooftop solar system, it quickly became evident that rooftop solar alone wouldn't produce enough energy to meet the hotel's energy demands – a common challenge in buildings with small rooftops compared to their overall size and energy consumption. Rather than compromise on its sustainability goals, Zeal embraced a bold alternative: a vertical solar installation. They had a clear and ambitious vision, and we're proud to have helped bring that vision to life."

Addressing challenges

Your Eco selected SolarEdge's advanced DC-optimised inverters and S-Series Power Optimisers for the project to address and overcome inherent design challenges associated with vertical solar arrays. These challenges include a higher risk of shading caused by nearby buildings, trees and other surrounding structures, as well as the varying angles of sunlight throughout the day – all factors that can significantly reduce energy production in traditional string inverter systems. In traditional systems, solar panels are connected in series, meaning that if even one panel experiences reduced performance, the output of all connected panels

is negatively affected. SolarEdge Power Optimisers address this issue by enabling solar panels to operate independently. This ensures that any performance loss is isolated to the specific underperforming panel, thereby maximising the overall efficiency of the system.



With its suite of inbuilt safety features, the SolarEdge system also met the hotel's requirement for enhanced safety. These features include SafeDC™, which is designed to automatically reduce the voltage within solar arrays to touch-safe levels within just a few minutes, allowing safe roof access for maintenance crews and, in the unlikely event of a fire, for emergency responders.

Additionally, S-Series Power Optimisers are equipped with Sense Connect – an advanced arc-fault detection and prevention technology. Sense Connect continuously monitors for localised temperature increases, enabling the early identification and mitigation of potential arc faults before they pose a risk.

“As demand for clean, renewable power continues to rise, vertical solar installations are expected to become increasingly common. However, achieving their full potential requires innovative technology – especially when panels are used as cladding, which brings added requirements like strict fire safety standards,” says Spicer. “SolarEdge’s technology ensures the solar façade is both efficient and safe, offering significant cost savings and peace of mind.”

|| As demand for clean, renewable power continues to rise, vertical solar installations are expected to become increasingly common. ||

Battery storage

Zeal Hotels has plans in place to install on-site battery storage at its Exeter location, allowing excess solar energy generated during daylight hours to be stored and then used during the evening and at night. At present, any surplus energy produced by the solar system is exported to the grid during the day and then imported back in the evening.

Looking beyond the current site, Zeal Hotels is actively exploring additional locations for the development of new net-zero carbon hotels, using the voco Zeal Exeter Science Park as a scalable and replicable blueprint for future sustainable hospitality projects. In addition to its own expansion plans, the company is also collaborating

with other developers who are seeking to design and build net-zero hotels, helping to accelerate the shift towards a more sustainable hotel industry across the UK and beyond.

Tim Wheeldon, Founding Director, Zeal Hotels, comments: “The decision to build our net-zero hotel reflects our commitment to combating climate change and reducing our carbon footprint. By harnessing renewable energy sources, implementing energy-efficient designs, and using innovative technology, we have created a space that not only provides comfort and luxury but also prioritises environmental responsibility.”

www.solaredge.com/uk

Guarding the Grid

Practical Defences Against Tool, Cable, and Site Theft
by Matthew Uttley, Head of Renewables at DeterTech

IT'S 6am on a freezing Tuesday in February and installer Mark is staring at the back of his van — the doors have been pried open, and £8,000 worth of specialist tools and equipment are gone. The week's solar installations are cancelled, and deadlines delayed.

Sadly, this story isn't unique. Across the UK, tool theft is hitting the renewable energy sector hard. In 2024, 25,525 thefts were reported, occurring on average every 21 minutes and amounting to an astounding £40 million worth of stolen tools. The cost of lost business and replacing equipment is proving detrimental to tradespeople's reputations and livelihoods. Beyond being an inconvenience and a substantial financial loss, is the emotional toll.

Nearly 90% of UK tradespeople worry about tool theft and four in five working in construction report mental health challenges, largely driven by the persistent issue of tool theft and the emotional toll it takes. It is clear that taking protective measures isn't simply about preventing loss and reducing crime, it's about safeguarding wellbeing and ensuring installers can help to build a greener future without worrying about falling victim to ruthless criminals.

As the renewable industry continues to evolve and move toward net zero targets, remote solar, wind, and other critical infrastructure sites are urged to consider a variety of security solutions to protect equipment and provide peace of mind for all.

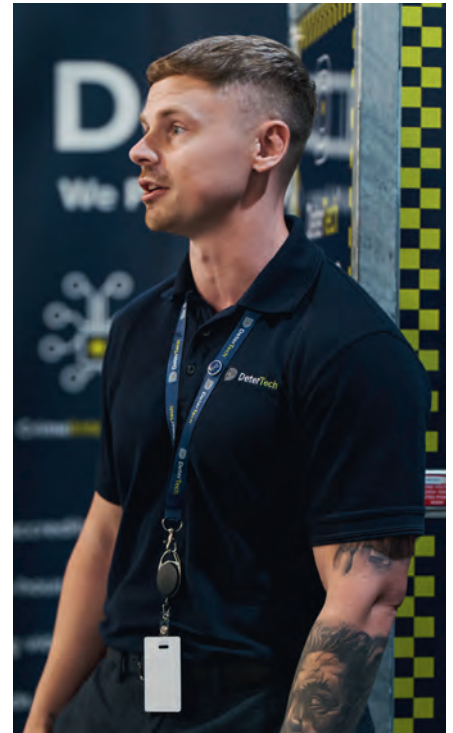
Threats to the Sector

Theft of copper cable from critical national infrastructure has been recognised as an ongoing issue in recent years, with solar and renewable sites experiencing a surge in attacks. Between January and August 2024, over 750km of cable was stolen from renewables sites, and since 2024, attacks are up by 300%.

According to DeterTech crime analysts, these attacks are often the work of organised crime groups who intentionally target renewable sites due to the isolated, remote locations. Typically, difficult to secure, these sites regularly have large volumes of copper cable, solar panels, and equipment that is of extremely high value. Therefore, it is important to take all possible steps to secure perimeters, provide 24/7 surveillance across sites, and use trusted technologies including forensic marking solutions such as SmartWater, to protect materials and equipment.

The Frontline Problem

Whilst it is important for large-scale cable and solar theft to make headlines and raise awareness of the very real threat to these sites, everyday tool and equipment theft is often not highlighted to the same degree. Tool theft has become so widespread, that police forces often lack the resources to process the sheer volume of reported offences. However, the impact of



these thefts, as mentioned, is enormous; for tradespeople working on solar, wind, and battery storage projects, a theft can disrupt a project for weeks. Between remote sites, and vulnerable vans containing specialist, expensive tools, installers have become easy targets for opportunistic criminals and organised gangs.

After falling victim to theft, projects grind to a halt, and on top of managing insurance claims and filing police reports, installers are forced to reschedule work, repurchase equipment, and manage frustrated clients, which to a small business can be detrimental. Beyond the financial



strain, installers working in remote or poorly lit areas may feel threatened and unsafe, the constant fear adding to already demanding roles. This makes it imperative for actions to be taken to ensure installers feel safe and have peace of mind about tools and equipment both during the work day and out of hours.

What’s The Solution?

Despite the severity of the issue, there are a myriad of options to help combat tool and equipment theft for all industry professionals ranging from independent installers, up to big contractor companies. With theft continuing to threaten profitability and mental wellbeing, deterrence, prevention, and recovery strategies are all essential. Fortunately, there are tried and tested solutions available, from forensic marking technologies to 24/7 monitored surveillance which helps installers to protect valuable assets, deter criminals, and detect threats.

Forensic Marking

One of the most effective deterrents against theft is forensic marking. The first company to create forensic marking, SmartWater – owned by DeterTech – uses innovative technology which allows every marked item to be identified and traced back to its original owner. The invisible liquid is made up of different concentrations of five unique rare earth minerals, making every batch unique to the individual and is only visible under UV light. Installers can mark tools, equipment, vans, and any other important belongings, which, once registered to the owner, can be traced by the police if lost or stolen.

In June 2024, Kent police recovered over 3,500 tools valued at over £1 million, however, only a small number were traced back to their rightful owners due to the lack of identifying features. It is often the case that police will successfully recover tools but are unable to prove they are stolen or who they rightfully belong to, hence making forensic marking an ideal solution.

The other benefit of forensic marking is the deterrence factor. Many thieves are aware of the risk of stealing forensically marked tools and in fact, 74% of criminals said they would not break into premises with SmartWater signage. Stopping as many thefts as possible is key, making deterrence imperative. Therefore, all installers should consider forensic marking and clearly label their vans to inform thieves that the tools inside are traceable and identifiable.

Temporary 24/7 Surveillance

When it comes to site security, detection and response time are key; the sooner a threat is detected, the more likely the perpetrators will be caught. Installing CCTV across sites and

hiring security guards during non-work hours whilst effective are costly methods so may not be viable solutions for some sites. Alternative security options include temporary 24/7 site surveillance devices, such as DeterTech’s PID360s. To help keep costs low, these devices are available to hire and work by recording footage which is monitored in an alarm receiving centre. To further deter intruders, when movement is detected, loud alarms are activated, stopping criminals in their tracks. Temporary site security provides real-time visibility across even the most remote and exposed sites and keeps them protected and making them ideal for renewable energy sites.

By being proactive and planning ahead through investing in strong security measures such as forensic marking and temporary around-the-clock surveillance devices, project managers, installers and other professionals can ensure greater peace of mind, ensuring their tools, time, and reputation are protected.

www.detertech.co.uk

“ After falling to theft, projects grind to a halt ”



We can't power the UK without people - Solving the solar skills shortfall

Mark Krull, Director of LCL Awards, explores how the UK can close the solar skills gaps, making the Solar Roadmap a reality.





THE Government has its sights set on the UK becoming a clean energy superpower and solar is central to that vision. The new Solar Roadmap charts the path to net zero, with a clear target of 45-47GW of capacity by 2030. If delivered, millions of homes could benefit, helping cut bills and strengthen the nation's energy independence, all while tackling the climate crisis head-on.

There is a caveat, though. The panels won't install themselves and unless we rapidly expand and upskill the workforce, the UK's solar ambitions risk stalling on the starting line.

The scale of the challenge

Evidence from the Department for Energy Security and Net Zero (DESNZ) suggests solar could support around 35,000 jobs by 2030 - roughly double today's figure. A strong upside for employment and the supply chain, but it also makes clear that tens of thousands of trained installers, designers and operations staff must be recruited and qualified inside the decade if the Roadmap is to be delivered at pace.

The UK's solar capacity is already around 18GW, with an increase of 1.1 GW since early 2024, demonstrating clear market growth. But moving from that figure to 45-47GW in five years requires more than panel installations and planning consents; it's about a step-change in routes into the sector, training capacity and employer engagement.

Tips to build the workforce

1 Trained electricians must lead the charge
Before chasing new entrants, we must mobilise those already closest to the work. Trained electricians are the fastest and safest route into large-scale Solar Photovoltaic (PV) and battery installation. New qualification guidance and centre entry rules (effective 1 September 2025) now expect a Level 3 award in the Requirements for Electrical Installations (BS 7671) and an appropriate Level 3 electrotechnical NVQ or equivalent as the baseline for specialist solar and EESS courses, ensuring installers arrive job-ready.

For industry, the message is simple: incentivise upskilling the existing installer base before trying to recruit from scratch.

2 Real experience, in the classroom and onsite
We need trainees to have access to real-world experience, with options to suit different entry-points. Centres that combine employer-led placements, workplace assessment and clear progression to NVQ or apprenticeship routes will speed the transition from trainee to deployable installer.

We're already seeing what works well. At MidKent College's Green Skills Centre and The Energy Training Academy's Net Zero Home in Edinburgh, training takes place around live demonstration systems - functioning solar PV, battery storage and heat pump installations that mirror real-world sites. These LCL Awards-approved centres blend practical learning with employer engagement, allowing trainees to design, install and commission systems under supervision. It's a model that connects education directly with industry needs, builds confidence, and produces work-ready installers rather than paper-qualified candidates.

These hubs are a glimpse of what's possible and if every region had access to similar facilities (including mobile rigs or pop-up training labs that visit colleges and employers) we could expand capacity quickly while maintaining standards. Scaling this network, backed by accredited qualifications, is one of the most effective ways to build the workforce needed to deliver the Solar Roadmap.

3 Use public building programmes to create training pipelines
The Roadmap calls explicitly for rooftop deployments on public estate - a prime example being the school rollout. Every school installation can double up as a training opportunity, for local college apprentices, for example. School-age pupils can also be engaged, getting to see first-hand the benefits of renewables through energy monitoring and comparative savings. Utilising low carbon upgrades as an opportunity to encourage the next generation into engineering careers, multiplies the return on public investment: carbon and cost savings plus skills creation.

Again, we've already seen how effective this can be. Under the Great British Energy (GBE) pilot programme, schools such as Ark Victoria and Ark Kings Academies in Birmingham are not only cutting bills through solar generation but also engaging over 2,000 pupils in workshops, assemblies and STEM sessions. Pupils monitor energy output through dashboards, fly drones over their own roofs and meet the engineers behind the installations - a powerful way to connect learning and technology, helping to

shape and inspire future career paths, while also engaging local communities in the benefits of clean energy.

4 Launch a UK-wide training incentive for solar
The government's Heat Training Grant for heat pump engineers has proven how a simple, subsidised offer can remove cost barriers and accelerate upskilling. For solar and battery installation, however, support remains patchy.

England's Warm Homes Skills Programme has invested £8 million in retrofit and low-carbon training (including some solar) - funding up to 9,000 places. But the first phase of applications is now closed, and a proposed phase 2 is not yet confirmed. In London, the Solar Skills initiative offers up to £1,000 for PV training in the capital, yet no equivalent scheme exists elsewhere.

Both programmes show how industry and local government can work together, however region-bound, time-limited initiatives that aren't tailored to full solar or battery installer conversion risk leaving workforce growth uneven and slower than the pace required.

A training grant, available UK-wide and ring-fenced for solar and battery installer training, would plug that gap. Course subsidies, travel support and employer vouchers would help electricians and heating engineers retrain at scale. A single, visible national offer would level access, give employers confidence to invest, and help build the skilled workforce needed to deliver the Solar Roadmap's ambitious goal of tripling UK solar capacity within the next five years.

5 Support employers to invest in training and retention
Small-to medium-sized enterprises (SME) often struggle to release staff for training or to absorb the cost of supervision time. Practical incentives, such as wage subsidies for trainees or tax relief linked to accredited training and apprenticeships, would help firms commit to developing the next generation of installers. Building long-term capacity depends not just on funding courses but on supporting the businesses that employ the people who take them on.

A people-powered transition
The Solar Roadmap is an ambitious but achievable plan, provided we treat people as central to delivery, and not just an afterthought. Electricians, trainers, colleges, manufacturers and policymakers must work in concert to scale capacity, simplify routes into the sector and ensure consistent standards.

The technology is ready; the opportunity is here. What's needed now is the workforce to match it.

www.lclawards.co.uk

What does the Future Homes Standard mean for electrical installers?

In this article, Lee Sutton, Co-Founder and Chief Innovation Officer at myenergi, delves deeper into impending government policy surrounding the energy performance of new build properties and explains why installers should see the change as a serious commercial opportunity.

THE way new homes are built and powered is about to fundamentally change, thanks to the Future Homes Standard (FHS) – a government policy that will apply to all new homes built in England from Autumn 2025. Its main aim is to significantly reduce carbon emissions from housing by ensuring that all developments are energy-efficient, low-carbon and future-ready.

Bringing together EV charging, solar generation, battery storage, heat pumps and smart controls into a seamless, efficient, and future-ready system, the FHS has the potential to unlock significant opportunities for electrical installers. With preparation, it will open the door to new business models, deepen customer relationships and enable installers to take a frontline role in the UK's green transition.

FHS 101: What installers need to know

The FHS will soon be written into UK law, after which point there will be a transition period until December 2026, with compliance required for all new build homes from 2027 onwards. This approach aims to give housebuilders a grace period, while also providing sufficient time to make necessary preparations.

From this point, every new home in England must meet a stringent new benchmark for carbon emissions and energy performance. This includes a ban on gas boilers, with air- and ground-source heat pumps now becoming standard, as well as mandatory solar panel installations for approximately 90% of new homes.

This supplements existing legislation from 2022 which says that all single dwellings with a driveway must have a fully-functioning, smart-enabled EV

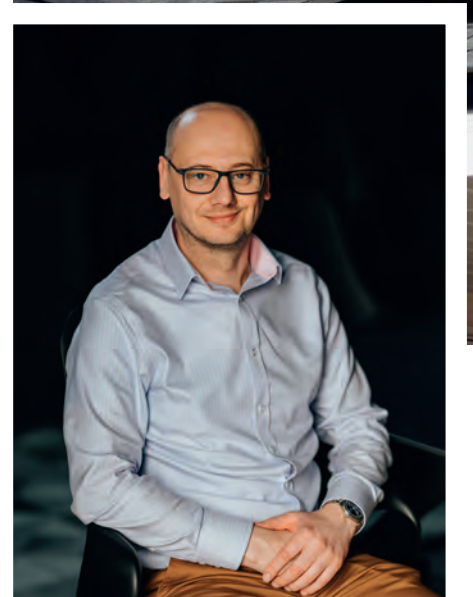
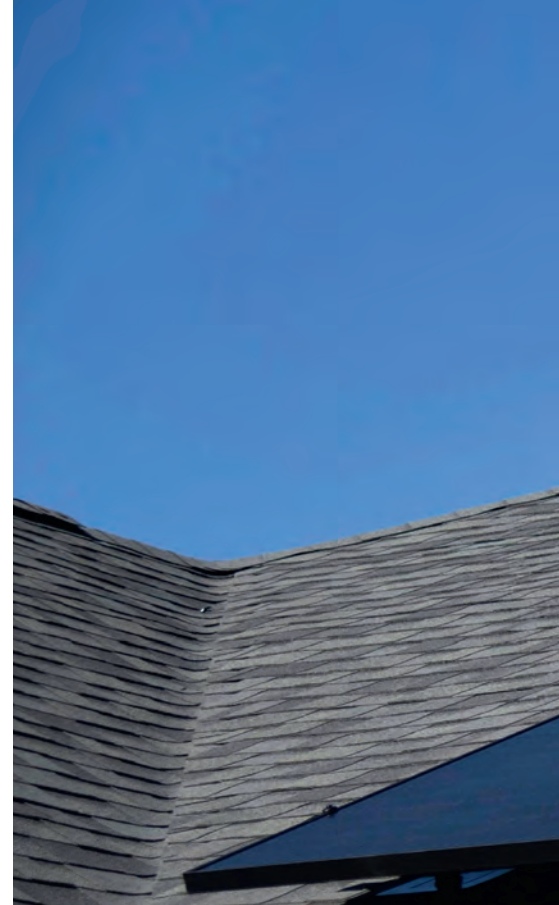
charger installed that's capable of responding to time-of-use tariffs and managing grid load.

As an example; zappi GLO, the latest solar-compatible EV charger from myenergi, is a solution for meeting these new requirements. The eco-smart device offers out-of-the-box energy tariff integration and automated solar compatibility as standard. This means users can harness energy from their own microgeneration or take advantage of smart energy tariffs. In addition, smart devices like zappi GLO offer interconnectivity with other home energy technologies, such as heat pumps and water cylinders. Together, these devices can form part of a complete home energy ecosystem which offers users more control over how and when they consume energy – a real step towards true energy independence.

Why does the FHS matter?

With the removal of gas as a primary heating fuel, new homes will rely almost entirely on electricity for their heating and hot water. When you add in the new requirements for EV charging, there will be more demand, more complexity and more opportunity for the skilled electrical installer.

The future of smart technology surrounds integration, with the ambition of heat pumps, solar PV, battery storage and EV charging all working together as an interconnected energy ecosystem. As such, housebuilders will rely on installers that can understand and deliver systems that balance the electrical load from heat pumps and EVs; optimise solar generation and self-consumption; integrate smart controls, sensors, and tariff-based automation; and that can future-proof homes for bi-directional energy flows, such as vehicle-to-grid (V2G).



Success for the savvy installer may sound complex, but the opportunity is clear. To take full advantage, the perfect match of technical readiness, product knowledge and collaborative planning with developers, builders, and energy assessors is key.

Four ways to prep for the Future Homes Standard

Step 1: Think big

Future-ready homes won't just have an EV charger or solar inverter, but a fully integrated energy system. For installers, that means going beyond single-point installations and thinking holistically. Whether it's combining heat pumps with solar PV, linking EV chargers with battery storage or configuring smart controls that respond to off-peak tariffs, these systems must now work together.



Understanding how different technologies interact both physically and digitally is critical. At myenergi, for example, we've developed an ecosystem where products like our zappi EV chargers, eddi power diverter and libbi home battery integrate seamlessly through our app, enabling efficient, automated energy flows that simplify smart home management for the end user.

Step 2: Know the regulations inside out

Being FHS-ready isn't just about knowing the technologies available, it's about understanding the rules that shape the build. Key sections of Building Regulations underpinning the FHS include Part L (energy performance), Part S (EV charging provision), Part O (overheating mitigation), and Part F (ventilation).

These regulations are interlinked and a misstep in one area can cause problems in another. For example, the placement of equipment affects not only performance but also a building's ability to meet overheating standards. Installers who understand how these elements work together can offer valuable input at the design stage and avoid costly last-minute changes on-site.

Step 3: Train, upskill and partner

The technologies that underpin the FHS are evolving fast and installers who are well-prepared will be able to take full advantage of the opportunities afforded. That's why ongoing training and manufacturer engagement are more important than ever.

Whether it's learning the latest in heat pump installation, understanding battery storage management or getting to grips with smart energy automation, upskilling is a direct investment into the business.

At myenergi, we offer training courses and hands-on technical support to give installers complete confidence, while also supporting with marketing and lead generation. Partnering with trusted suppliers who understand the market and the challenges facing their customers, far beyond simply making sales, can help installers gain that real competitive edge.

Step 4: Look to the long term

Modern eco-smart systems can generate valuable performance data to help homeowners track their usage and optimise energy habits. By adopting smart-enabled, data-compatible technologies now, energy consumers can better prepare

their homes for an increasingly connected and interoperable future.

For installers, this also presents an opportunity to offer long-term value through monitoring, aftercare and system optimisation services. By helping clients understand how to maximise self-consumption, time-of-use savings or EV charging efficiencies, installers can build trust and open the door to recurring revenue – whether through callouts, upgrades, or service contracts. In a world of connected homes, customer relationships no longer end at job completion.

Looking ahead to 2027

The FHS is a bold step forward towards decarbonising UK housing. While certainly presenting challenges to housing developers, it presents a huge opportunity for installers. As every new home becomes a virtual power station – generating, storing, and consuming its own clean energy – electrical expertise will quickly become more important than ever. 2027 will roll around in the blink of an eye, so getting ahead of the curve now is key to reaping the biggest and best rewards.

www.myenergi.com

Low Carbon Living

Why networked ground source heat pumps and community heat hubs should lead the way

By Neal Herbert, Managing Director, GTC



THE drive to decarbonise UK housing is entering a new phase. With the Future Homes Standard (FHS) expected to become mandatory imminently, the heat delivery choices we make now will set the trajectory for decades to come.

For energy installers and specifiers, this shift is not just a regulatory hurdle, it is an opportunity to shape a more resilient, cost-effective, and low-carbon heating future across the country. But to

realise that future at scale, we must move beyond individual heat pumps toward shared systems like networked ground source heat pumps and community heat hubs.

The Future Homes Standard: new build decarbonisation in motion

The FHS consultation paper lays out new minimum performance requirements for new homes, including much tighter fabric efficiency, ventilation, and renewable energy integration. Under the proposals, new gas or oil boilers would no longer meet the carbon requirements of new builds, making heat pumps or low-carbon heat networks the de facto route.

For homes connected to communal heat networks, the FHS consultation defines a “4th generation heat network” model, with a primary plant SCOP (seasonal coefficient of performance) of 3.0 - networked ground source heat pumps and community heat hubs do meet, and in many cases, exceed this.

In addition, the FHS is expected to drive solar PV installation as part of the notional building model. This means new-build homes will be

expected to produce part of their own electricity and source heat from low-carbon systems.

One of the key risks for developers and installers is grid capacity. Many sites are constrained or require expensive reinforcement to support electrified heating at scale. That’s why heating solutions that don’t unduly stress the grid, that can route peak demand, smooth out loads, and share infrastructure, should command interest.

This is where networked ground source heat pumps and community heat hubs shine - especially in new build developments.

Why individual air source heat pumps may not cut it at scale

Air source heat pumps have earned a central place in public discourse about decarbonising domestic heating. Their maturity and modular nature make them an appealing “default” technology in many scenarios. The consultation itself models a notional building using an equivalent air source heat pump as the reference device.

Yet in practice, deploying air source heat pumps at scale raises multiple challenges:



For many environments including terraced streets, mid-density housing, and mixed-use developments, air source heat pumps are simply less optimal when compared to shared, ground source-based solutions, especially when upcoming regulation demands high efficiency, low losses, and integrated energy systems.

Networked ground source heat pumps: a compelling low-carbon alternative

Networked ground source heat pumps combine the benefits of individual ground source heat pumps with shared infrastructure. In this model, each home has its own heat pump (for heat, hot water, and often passive cooling), but these are connected via a buried, low-temperature network of pipes and shared borehole or ground loop infrastructure - often installed in tandem with other utilities.

Key advantages:

1. Higher and more stable efficiency

Because ground source heat pumps tap into stable ground temperatures, their COPs stay high and less variable through the seasons.

2. No bulky external plant or unsightly outdoor units

The heat pump fits neatly inside the home, avoiding the need for external compressors or visual intrusion.

3. Low network losses and distribution efficiency

Because the network circulates low-grade ambient-temperature fluid (not high-temperature heat), distribution losses and overheating risk are reduced.

4. Flexibility, modular growth, and developer certainty

As demand climbs, new dwellings can be tied into the same network without reconstructing the entire system. Developers can benefit from a single infrastructure provider (GTC handles design, borehole drilling, network installation, adoption, and operation) rather than juggling multiple heat engineers, drilling companies, and installers.

5. Regulated utility status and long-term governance

The networked ground source heat pump model is registered under Heat Trust and will be regulated by Ofgem from January 2026, giving homeowners assurance on maintenance, replacement, and billing.

A call to action: installing low-carbon futures, together

Networked ground source heat pumps and community heat hubs represent not just another option, but the optimal pathway for many new-

build projects under the Future Homes Standard. For installers and specifiers, this is a moment to engage, learn, partner, and lead.

Here are some practical steps your businesses and teams can take now:

1. Get involved in pilot projects

Seek out local developers or housing associations planning new schemes. Propose networked ground source heat pumps early in the planning process.

2. Forge alliances with infrastructure integrators

Partner with utility network firms such as GTC to offer bundled, adoptable solutions rather than just component installation.

3. Collect and present lifecycle cost data

Build calculators and case studies showing capital, running cost, grid cost, servicing, and risk mitigation benefits of shared systems vs isolated heat pumps.

4. Work with regulators and local authorities

Engage in planning consents and local energy strategies, helping councils understand the viability and benefits of shared low-temperature networks.

5. Promote consumer confidence through regulated frameworks

Use systems that are Heat Trust registered and backed by regulatory oversight, so homeowners feel secure about ongoing maintenance and service.

In the next few years, the UK housing sector will see a wave of low-carbon new builds. Many of them, unless steered properly, may end up with fragmented, individual heat pump systems that miss economies of scale, generate grid stress, and complicate operations. But we don't have to accept that suboptimal path.

As specifiers and installers, you can advocate for networked solutions and contribute to building low-carbon homes that deliver comfort, reliability, affordability, and climate integrity for decades. GTC is committed to making this vision a reality through infrastructure adoption models, operational guarantees, and deep partnerships across the housing sector.

The Future Homes Standard is not optional, it is coming. Let us seize it not merely as a compliance challenge, but as an opportunity to rebuild how we think about heat delivery, community energy, and the homes of tomorrow.

www.gtc-uk.co.uk

Seasonal performance variability:

Air source systems draw heat from ambient air, which drops in winter. Their coefficient of performance (COP) falls significantly at lower temperatures - putting pressure on sizing, buffer tanks, and sometimes requiring oversized systems or hybrid backup.

Noise, space, aesthetics:

Outdoor units must comply with local acoustic and planning constraints. For dense developments or flats, finding suitable mounting locations (especially under strict planning rules) can become a blocker.

Grid stress: Many air source heat pumps are sized for high peak demand (especially in cold snaps), which can concentrate electrical load across a development. That increases the risk of local grid constraint or need for reinforcement.

Lack of flexibility in shared systems:

With individual air source heat pumps, aggregating demand or balancing peak loads across dwellings is difficult. There's no shared buffer or thermal storage, and each home is discrete in operation and maintenance.

From rooftop to grid: Why solar PV roofing is the cornerstone of the UK's net zero strategy

By Griff Thomas, Managing Director at GTEC Training and Heatly - part of United Infrastructure

If the UK is serious about reaching net zero without extensive lending from the public purse or taking up copious amounts of green space, the solution is staring us in the face, or should I say, above our heads.

Rooftops across the country represent one of the fastest, most cost-effective ways to generate clean electricity at scale. Making solar PV roofing the default for new build and retrofit projects will reduce energy bills, cut emissions and give the grid enough capacity to manage our electrified future. Recent government initiatives and industry research prove that momentum is building for solar PV, but policy, planning and the building trade have some catching up to do to make the most of this opportunity.

Various independent studies and industry research has found that rooftops, homes, commercial buildings, warehouses and car parks are well placed to deliver a significant share of the UK's solar potential. Rooftop solar has the potential to unlock tens of gigawatts of clean capacity by the 2030s, substantially reducing the footprint needed for large ground-based solar farms and bringing energy generation closer to where people live and work. This closer proximity could reduce network losses, reduce costly network reinforcement in many places, and give building owners a direct route to lower bills.

Putting solar on roofs is not a groundbreaking solution, but instead, a pragmatic option that dovetails with other decarbonisation measures, such as heat pumps, building fabric improvements and smarter demand management, which can all work in tandem to cut operational emissions across the built environment.

Shift in policy

2025 has seen a clear shift in the government's policy direction, with signals that rooftop solar is transitioning from 'encouraged' to 'expected' for new builds. The upcoming Future Homes Standard and related building regulation changes look set to make rooftop PV a routine part of new housing and non-domestic construction. A national Solar Taskforce and a government Solar Roadmap have also planned out how industry and regulators can scale installations and grid



integration over the next decade. These positive developments provide the regulatory certainty developers and financiers need to integrate solar into project economics from day one.

In addition, certain planning reforms and clarifications of permitted development rights, for example, making solar on flat roofs easier to deliver, get rid of some of the blockers that have slowed installations on certain building types. This is especially important for apartment blocks, commercial roofs and public sector stock where flat roofs are more common.

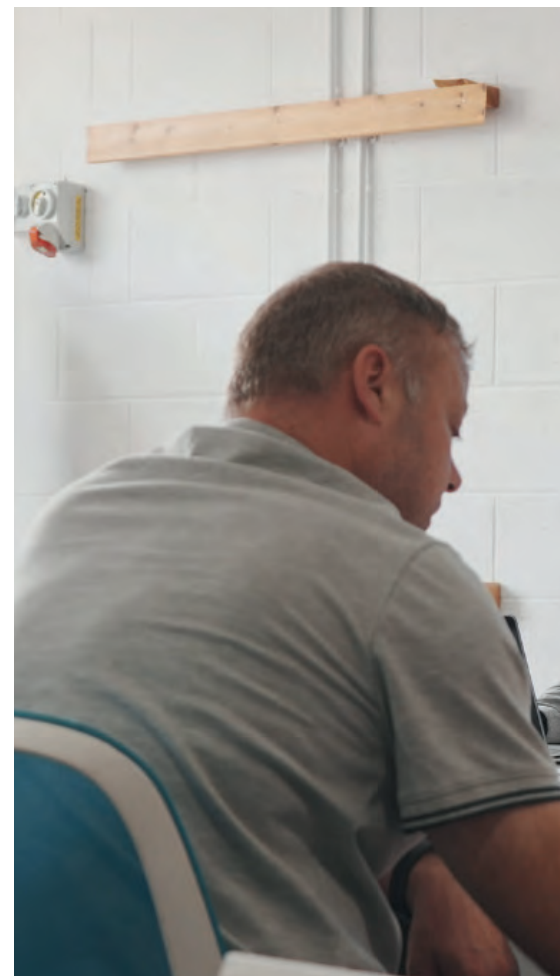
Getting solar ready

Mandating rooftop solar panels is feasible in many contexts, but even where a full mandate is not yet implemented, every new building should at least be solar-ready, designed and wired so PV, batteries and vehicle charging are easy, cheap and quick to add later. A solar-ready roof means preparing for structural capacity and orientation that supports PV arrays, adequate roof space or designed-in PV surfaces for pitched roofs, early electrical planning with routed conduits, a suitably-rated consumer unit and space for inverters and batteries with simple access and maintenance routes.

These are all relatively minor costs at the design stage that pay back by avoiding disruptive and expensive retrofits later. Developers should treat PV as an integral building service like plumbing

or electrics, rather than an optional extra. Guidance for planning electrical infrastructure for solar-ready new builds already exists and must be embedded into building regulations and developer checklists.

The commercial and industrial sector (particularly warehousing and logistics) is an obvious early win. Many of these buildings already feature vast, flat roofs, high daytime demand profiles and on-site vehicle fleets that create strong investment cases and short payback periods for rooftop PV. When combined across multiple sites, rooftop solar systems can be linked into larger setups with batteries and smart controls to cut peak demand and support the grid. Industry studies commissioned by trade bodies have already demonstrated compelling



returns for warehouse-scale rooftop solar, and now we need capital markets, corporate procurement teams and local planning authorities to move faster.

Distributed rooftop PV is not just a source of energy generation, but an asset to strengthen the grid. With the help of smart inverters, batteries, and demand-side management, groups of solar roofs can balance supply and demand, support local voltage, and reduce peaks in electricity use. This lowers the need for costly grid upgrades and backup power plants. To unlock these benefits, we need simpler connection processes, easier export agreements, and faster rollout of local energy systems and flexibility markets. The Solar Taskforce roadmap shows the way forward, but industry and regulators must work together to turn these ideas into real rules and products.

Industry capacity

Regulation and planning can make rooftop solar a requirement, but industry capacity is the crutch. Installing millions of roofs, batteries and EV chargers, demands a trained and accredited workforce of skilled designers, roofers, electricians and commissioning engineers. This is where organisations like GTEC Training come in. We need nationally coordinated training, a ramp-

“Distributed rooftop PV is not just a source of energy generation, but an asset to strengthen the grid.”

up of microgeneration accreditation pathways, and employer-led apprenticeships so the sector can scale without compromising safety and quality. Investment in training will create skilled, futureproof jobs in every region and reduce the risk of low-quality installs that harm consumer confidence.

Financial models

High cost remains a barrier for some homeowners and renters, so suitable financing models, green mortgages, lease-to-own and community finance will be essential to get solar onto rented housing, social housing and smaller commercial roofs. The wholesale economics for rooftop solar are compelling over the asset life, but short-

term capital constraints mean we must lean on blended finance and policy levers (tax incentives, business rate mechanisms, or targeted grant support) to get installations moving at pace.

To embed solar PV roofing as the cornerstone of the UK’s net-zero building strategy, policymakers and industry should focus on these five actions:

1. Embed ‘solar-ready’ requirements in building regulations for all new builds, ensuring that structural, spatial and electrical provisions are non-negotiable.
2. Finalise and fast-track the Future Homes Standard and related guidance to make rooftop PV essential in new homes, with clear timelines for compliance.
3. Streamline planning and permitted development rules where heritage and landscape protections do not apply and make technical approvals for interconnection simpler and faster.
4. Scale training and accreditation to ensure installers, designers and building professionals can deliver high-quality systems safely and at speed.
5. Mobilise finance and procurement, leveraging public procurement, social housing programmes and private capital to offer low-cost routes to install for hard-to-reach landlords and SMEs.

The UK can reach its net-zero goals more easily if we treat solar roofs as national infrastructure rather than a niche retrofit. Rooftop PV delivers obvious benefits, including lower bills for households and businesses, reduced strain on the network, creating local jobs, and rapidly reducing emissions from existing building stock. The policy signals in the last year show that government and industry recognise this, so now is the time to convert guidance into standards, roll out into training and finance, and make solar-ready the standard detail on every set of plans that leaves a UK architect’s studio. If we get this right, the next generation of homes and workplaces will consume energy differently, and be part of the solution, powering the grid from the top down.

www.gtec.co.uk



New evidence sets the roadmap for a decarbonised heat pump market in the UK

Martyn Bridges, Director of External Affairs at Worcester Bosch, shares his perspective on the UK's heat pump market – and new proprietary research that could change the state of play.

THE UK's ambitious plan to decarbonise heating en masse seems to be stalling or plateauing. This is despite heat pump sales growing at probably the fastest pace in the whole of Europe, but uptake hasn't reached sufficient levels to turn the tide on gas and oil-fired boilers.

For millions of homeowners, the leap from a traditional boiler to a full heat pump system is daunting. Yet, the latest figures show a growing market for both heat pumps and their installer base. Let's unpack the landscape for decarbonising the UK's heating stock.

The heat pump market is growing – but slowly. Heat pump sales figures in the UK have grown by 27% year-on-year. That's a healthy figure, but it comes with the caveat that it's from a fairly low baseline. Approximately 10,000 heat pumps are sold each month – equating to a likely 120,000 unit sales in 2025 compared to 2024's 98,000.

At the same time, more than 5,000 installers have enrolled on training courses to learn how to install heat pumps and diversify their portfolio.

The numbers are certainly indicative of the potential of low-carbon heating systems – but overall growth hasn't yet reached the level the government would like to see. At the current rate, its target of 600,000 heat pumps installed per year by 2028 will not be met.

However, when the Future Homes Standard is eventually published – under the umbrella of the Warm Homes scheme – we'll see what the government proposes to solve this problem in writing.

It's almost certain that any new-build property built from a given date will require a low-carbon heating system to achieve the mandated emissions targets – and heat pumps are the most likely technology developers will use.

Net-zero targets could shift

With decarbonisation efforts behind targets, the government is under increasing pressure to rethink its timelines on net-zero.



Martyn Bridges, Director of External Affairs at Worcester Bosch

Our electricity prices are amongst the highest in the world. The Energy Secretary continues to blame elevated gas prices, which are around 75% higher than they were before Russia invaded Ukraine. However, gas prices are still relatively cheap compared to electricity.

The CEOs of various energy companies recently appeared in Parliament to dispute that gas prices are the sole reason for higher costs, citing large subsidies as the actual cause.

By the end of this decade, it's suggested that around £300 of the average customer's electricity bill will be funnelled towards government-funded initiatives such as the Boiler Upgrade Scheme (BUS) and grid infrastructure improvements to accommodate electrification.

While timelines may shift, I don't see the government dramatically changing tack. There's no other viable alternative to natural gas, other than blends of biogas or hydrogen, perhaps. I believe that electrification would be the route taken under any government, no matter the political leaning.

There's an opportunity in hybrid heat pumps

Full heat pump configurations aren't the only option for low-carbon heating. Hybrid heat pump systems, comprising a gas or oil-fired boiler alongside an air source heat pump, are a popular choice for decarbonising home heating on the continent.

Presently, hybrids make up 50% of the Dutch heat pump market, with 30% of the installation costs subsidised by the government. In Italy, they represent 40% of the market – with 65% of installation costs eligible for recovery through a tax rebate.

Yet, there is no government funding available for hybrid systems in the UK. This may be due to historical trials that investigated hybrid performance and indicated they only contribute around 40% of the heat requirement of a property, on average.

This study was somewhat biased, however, as the hybrid systems tested were set to run on a cost basis. This means the control unit only activated the heat pump component of the system when electricity was the cheaper fuel source.

With gas being a quarter of the price of electricity, it's hardly surprising that the heat pump contributed just 40% of the required heat load to the property. In fact, I think it's surprising that it contributed even that much.

Worcester Bosch conducted its own investigation

Recently, Worcester Bosch and Salford University undertook a first-of-its-kind study into the performance of hybrid heat pump systems, endeavouring to more rigorously assess the contribution of the heat pump component.

To achieve a high level of control and realism, a typical terraced property was used complete with solid walls, in a climate chamber where a team could control the external temperature and weather conditions. This impressive facility, unlike any other we're aware of in Europe, can emulate weather conditions – from sunshine to rain and snow.

A Worcester Bosch 5800 hybrid system was installed in the property, and its heat load contribution was compared against a standalone Worcester Bosch boiler.

Contrary to earlier findings, Worcester Bosch found that the heat pump element contributed up to 100% of the heat load whenever the external temperature was 7c and above. Even when the external temperature was set to -2°C, the heat pump still contributed more than 70% of the property's heat requirement.

The hybrid advantage for homeowners

This new research sheds new light on the impressive performance of hybrid heat pump systems. They're also often the best fit for homeowners because hybrid heat pumps are substantially easier to install in a small property – particularly as they don't require a hot water storage cylinder if the homeowner has a combi boiler.

There's also no need to change radiators, pipework, or valves like there is with a full heat pump system. The hybrid can simply inherit the infrastructure already in the home.

Then, there's cost – one of the largest barriers for homeowners considering the leap to a heat pump. Hybrids are around half the price of a full heat pump system.

Next steps for the UK government

Today, the government acknowledges that hybrids exist and even grants them half a credit under the Clean Heat Market Mechanism. Regrettably, however, funding is not available through the BUS. Social housing providers can apply to finance a hybrid system via their various schemes, but nothing is offered directly to owner-occupiers.

Our investigation provided evidence we can put in front of the government to start a conversation around the potential of hybrid heat pumps. In our view, they're a far more viable solution to decarbonising the UK's domestic heating stock.

If the government was to offer even half of the full amount available through the BUS to help homeowners install a hybrid system, then we could effectively decarbonise two properties by 80-90% for the same price as decarbonising one property by 100% with a full heat pump.

Part of our challenge is to encourage the government to consider alternative ways to transition to low-carbon options. If we're talking about the most efficient use of taxpayer money, hybrid support must be on the table.

www.worcester-bosch.co.uk/heat-pumps





Svitlana Vovchenko

Solar skills for **Ukraine**: How UK businesses can help train an army of solar installers

By Svitlana Vovchenko, Director of the RePower Ukraine Charitable Foundation

In Ukraine, the war has damaged many power lines, and electricity is no longer something people can rely on every day.

After more than three years of war, people understand how important it is to have their own independent source of power but getting a solar system installed can take months because there are simply not enough trained specialists, particularly during the busy season.

One of the most significant barriers to scaling solar deployment in Ukraine is not technology, but people. The lack of skilled personnel significantly slows down Ukraine's ability to install solar at scale, leaving communities without the energy solutions they desperately need.

The skills gap in Ukraine's energy sector has reached a critical level. According to a 2024–2025 nationwide labour market study by the Federation of Employers of Ukraine, the State Employment

Service, and Helvetas Ukraine, 44.1% of energy sector vacancies remain unfilled due to a lack of qualified candidates — one of the highest rates across all industries.

The most pressing shortages include engineers, infrastructure specialists, high-voltage technicians, electricians and experts in solar power plant installation and maintenance.

The root of the problem lies in the lack of sufficient educational opportunities. Only a few vocational or technical programs exist to prepare people for solar-specific careers, leaving companies struggling to hire new staff and often forcing them to lower qualification requirements.

Solution in co-operation

At RePower Ukraine Foundation, we see the solution in co-operation between businesses, educational institutions, and local employment

centres. Supported by energy sector partners in the UK and the EU, the Repower Ukraine foundation has already implemented solar projects for 10 hospitals and 2 water supply systems, and successfully delivered the “Solar ReStart” course to train veterans and internally displaced persons (IDPs) in designing and installing PV systems, helping them find new jobs in the renewable energy field. The course has already run three times, each time with more attendees and each time hugely oversubscribed.

Building on this experience, we are now working to strengthen cooperation between the state, businesses, and educational institutions - so that employment centres can direct veterans and IDPs to training programs where they gain exactly the skills needed in the labour market. Our role is to bridge the gaps between all sides and make sure that reskilling those in need

The veteran and IDP students of the “Solar Restart” course are on an excursion to ground-mounted and rooftop PV systems



does not rely solely on charities, but becomes a scalable, sustainable system that incorporates our experience and material support - ultimately contributing to Ukraine's long-term resilience.

“Finally, I felt that we, veterans, are still needed by someone” - says Maksym who graduated from the PV system installation courses. He explains his motivation to attend the reskilling course “Solar Restart” and become PV system installer - “I wanted my work to be useful for people and society”. He has been an IDP since 2014, when Russia occupied his native city Donetsk. In 2022, he joined the armed forces and defended Ukraine for 2 years. Currently, he is a veteran working in the solar industry, helping people become resilient during electricity outages.

Together with local businesses, educational institutions and employment centres, we held roundtable meetings to establish a collaborative model and signed a memorandum of cooperation to launch training programs for solar installation technicians.

However, we cannot complete the project without external support - the lack of training equipment. Most institutions either lack the necessary tools or have too few to obtain an official license to teach PV system installation. Without this license, they cannot provide quality



The veteran and IDP students of the “Solar Restart” course are training at the only PV installer training centre in Kyiv training or offer veterans, IDPs, and unemployed adults real pathways to green jobs through free retraining programs.

Local businesses partially cover these needs, but it's not enough. We have a mission to equip

vocational centres with modern solar technology for hands-on learning as soon as possible. This will allow veterans returning from the front to learn a solar energy profession close to home, and enable other regions to follow this model.

We chose three institutions in western, eastern and south part of Ukraine, requiring only small improvements to launch the required educational program and expand training across selected regions:

1) Odesa Training and Retraining Center of the State Employment Service

Licensed for solar maintenance electricians but requires additional technical equipment for a full-scale launch.

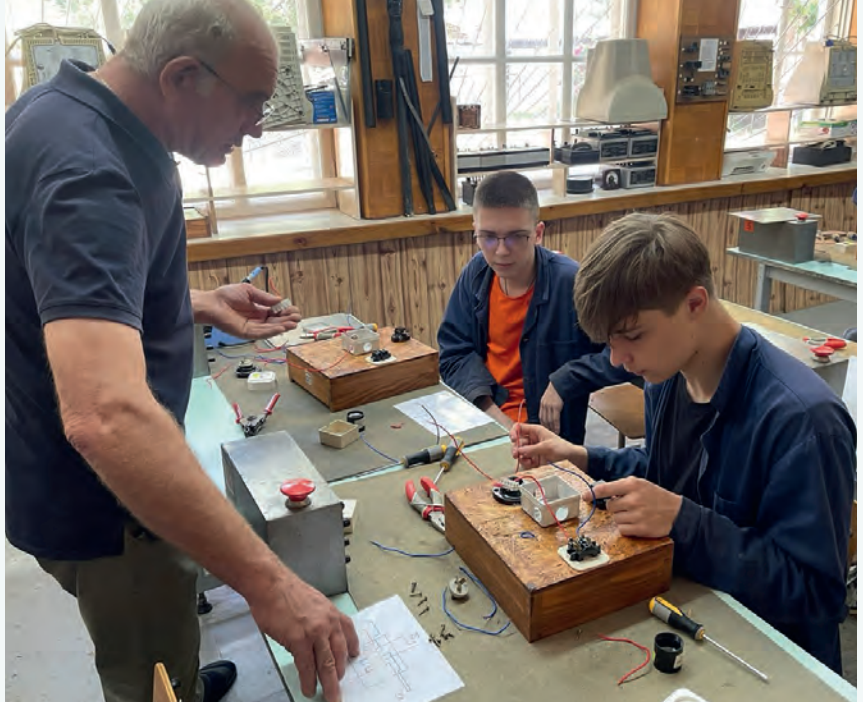


Natalia Drumova, Deputy Director of the State Educational Institution "Odessa Center for Vocational and Technical Education of the State Employment Service"

"Our training center just received 10 solar panels from international partners — we are incredibly grateful! It feels like a gift from Saint Nicholas, but in October, rewarding all our efforts. You can't imagine how much this means to us. We're almost fully equipped now and will soon be able to meet all the demand for solar installation training, especially from veterans and IDPs. There are so many of them in Odesa right now, and we genuinely want to help, but our resources remain limited. If you could support us with additional equipment, we would be able to train even more people who desperately need these new skills and opportunities." - says Natalia Drumova, Deputy Director of the State Educational Institution "Odessa Center for Vocational and Technical Education of the State Employment Service"

2) Poltava Polytechnic Vocational College (National Technical University "Kharkiv Polytechnic Institute")

Ready to license the specialty "Electrician for the repair and maintenance of solar installations" but requires equipment to create a modern training base.



Students at Poltava Polytechnic Vocational College are studying the specialty of electrician



3) Vocational School No. 25, Khmelnytskyi, Khmelnytskyi region

Already licensed for solar maintenance electricians, but lacks modern equipment and needs backup power to ensure uninterrupted learning during outages.

This project is more than about education — it's about strengthening Ukraine's resilience.

Every piece of equipment we receive, every donation we collect, helps people who lost their homes or returned from the front lines start a new chapter — mastering a profession that powers hospitals, schools, and communities with clean, independent energy during electricity outages.

By supporting this project, you're not just helping to buy solar tools or training devices.

You're helping veterans, displaced people, and unemployed Ukrainians gain new skills, dignity, and stability — while contributing to Ukraine's transition to renewable energy.

The equipment list reflects what's needed to establish replicable training hubs across three partner institutions. Each center requires both grid-tied and hybrid system components so students can learn to design solutions for different client needs — from simple grid-connected systems to autonomous power supplies for areas with unstable electricity. The variety of mounting systems ensures trainees gain versatility to work in any conditions, whether installing panels on hospital rooftops or ground-mounted arrays. By equipping these three centres now, we create a proven model that can be replicated in other regions, multiplying our impact as more institutions join the network.

Below is the complete list of equipment needed to launch these training programs:



If you'd like to stand with us and invest in Ukraine's renewable future, you can make a donation via PayPal: repowerorg@gmail.com

Together, we can turn sunlight into strength — and learning into lasting resilience.

For further information, please contact:

Darya Lazaryeva, PR and Communication Manager, RePower Ukraine
help@repowerua.org
 +38 (063) 841 37 94

Required equipment and additional material	Quantity required by the law for professional training	Poltava	Khmel'nitskiy	Odesa	TOTAL
Monocrystalline Solar Panel, pcs	1	1	10	1	12
Polycrystalline Solar Panel, pcs	6	6	10	0	16
Charge Controller, pcs	6	6	10	6	22
Lithium-ion Battery + BMS Controller (incl. battery monitor), kits -HV/LV	6	6	6	6	18
Grid Solar Inverter 5 KW, pcs	1	1	2	1	4
Hybrid Solar Inverter 3-5 KW, pcs - HV/LV	1	1	2	1	4
Lightning Protection, kits	2	2	1	2	5
Rail Mounting System Slope, kits		2	2	2	6
Tracker Mounting System, kits		1	1	1	3
Flat-Roof Mounting System, kits		1	1	1	3
Ground Mounting System with/without screws, kits		1	1	1	3
Solar Cable, meters		100	100	100	300
Solar Protection Kit, kits	6	6	6	6	18

The guide to what's new for Renewable Energy Installer & Specifier readers, offering vital industry news.

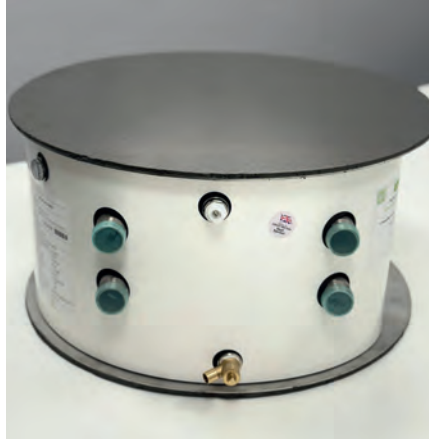
To advertise your product in 'The Innovation Zone' section please contact victoria.liddington@warnersgroup.co.uk

Technology to simplify heat pump installations

Hewer, a leader in sustainable heating solutions, has launched Heat Saviour™, a groundbreaking technology that simplifies heat pump installations and maintenance, saving time, money and hassle.

Heat Saviour™ is a first-of-its-kind pre-assembled unit which conveniently sits underneath a standard hot water cylinder. Unlike traditional heat pump systems, which tie households into specific manufacturers' components due to their singular loop design, Heat Saviour™ enables the use of off-the-shelf components for quicker installation. Operating on a dual-circuit loop, the heat pump runs independently of the existing central heating, eliminating the need for system overhauls. This minimises disruption and downtime, cuts labour costs by up to 20%, and delivers homeowners savings of up to £2,000 per installation.

Stuart Hesk, Director at Hewer, said: "Installing and retrofitting heat pumps can be complex, costly and disruptive. Heat Saviour™ is a much smarter and cheaper way to install and use a heat pump, making property management easier and improving home occupier satisfaction. We saw



the amounts of unnecessary waste, cost and downtime that installing and retrofitting heat pumps was causing. As a customer-first business, we set about inventing a solution to tackle these issues."

With glycol only in the heat pump circuit, Heat Saviour™ cuts glycol use by 80%, which is better for the environment, and allows radiator maintenance without the costly expense of having to drain and replace the glycol. The unit also has a built-in backup heating element, which can either be switched on manually or controlled remotely, avoiding downtime during maintenance or pump failure – crucial

for vulnerable people - and reduces how often engineers need to enter the property.

Over 1,000 social housing properties across the South West are already benefiting from Heat Saviour™, including those managed by social housing providers Two Rivers Housing, Bromford, Green

<https://www.hewerfm.co.uk/heat-saviour>

Fernox launches new mobile app and web portal for smarter water testing

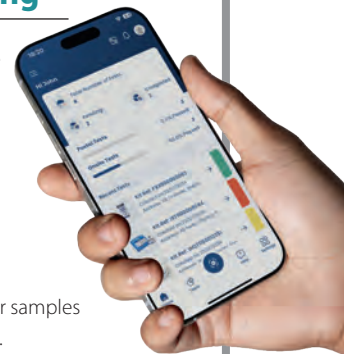
Fernox, a leading manufacturer of water treatment chemicals and system filters, has announced the launch of its newly refreshed mobile application. This powerful update delivers a smarter, faster, and more intuitive experience for installers and heating engineers, offering a range of upgraded features designed to streamline on-site system, postal testing, and reporting.

Building on Fernox's dedication to innovation and installer support, the enhanced app is engineered to save time and boost efficiency with real-time tools for water testing, treatment recommendations, and easy access to technical documentation.

The new Fernox App Includes:

- Secure Multi-User Access: Easily invite team members, managers, or other parties to view and download water test reports.
- Customisation Options: Handy personalisation tools let engineers tailor the app experience to their specific workflow.
- Company & Address Finder: A comprehensive global address finder tool, with the capability of company name searching for quick and clean sample entry.

- Professional Reporting Tools: Generate and share comprehensive reports directly from the app.
- Instant Product Recommendations: Receive personalised treatment guidance based on test results, ensuring the right Fernox products are matched to each system's unique needs.
- Offline Submissions: Users can now submit water samples without the need for Wi-Fi or mobile data access.



"The updated Fernox app was designed with the installer in mind – providing practical tools that make testing quicker and more convenient on-site," said Mike Skivington, UK & Ire Sales Director at Fernox. "This upgrade reflects our mission to deliver smarter solutions that support heating engineers in maintaining system health and performance."

The new Fernox App is available for download now from the Apple App Store and Google Play Store, click here -

<https://fernox.com/download-app>

To find out more, watch Fernox's Instant System Test Demo, click here -

<https://fernox.com/app/instant-system-test/>

Gain CPD points with ciphe-approved Fernox online training course

Fernox has recently received CIPHE CPD approval for its online training course, which offers valuable insights into the importance of chemical water treatment and filter technology. The course provides a comprehensive overview of the Fernox product range, explaining how it addresses common system challenges and highlighting the key regulations installers must follow.

The Fernox online training course delivers a wealth of information in short, dynamic Q&A style sections on screen, which include 1–2-minute explainer videos throughout. The content covers why chemical water treatment is needed and why cleaning, inhibiting and filter technology are all crucial



to system efficiency and longevity. The course also highlights the mandatory requirements under Building Regulations – Part L and how to comply through the approach of: Clean, Guard, Protect, Maintain and Test.

“Having pioneered chemical water treatment and long championed training and education in the industry, we are really proud of the Fernox online training course, which is now CPD approved by CIPHE,” explained Claire Lopez, Senior Marketing Manager at Fernox. “The educational content is ideal for a wide range of people - whether they are new to the industry or are just looking to refresh or deepen their understanding of the product solutions available.”

Participants can test their knowledge with a short quiz and download a certificate of completion at the end of the course.

Start learning today at: www.fernox.com/training/uk

Established in 1964, Fernox is a leading manufacturer of water treatment chemical products, central heating system filters, plumbing consumables and diagnostic testing services and has pioneered the development of energy efficient products both for traditional and renewable technology in domestic and commercial applications. The company operates as a subsidiary business of MacDermid Enthone Industrial Solutions, a global diversified producer of high technology specialty products and a provider of technical services, and is a business unit of Element Solutions Inc.

Shield selects SYNC Energy as it switches to electric

When specialist technical contractor, Shield committed to transforming its fleet of company cars to electrical – and knowing that the van fleet was also planned - it decided to install a comprehensive EV charging facility at its new head office in Bristol. Working with Sync Energy, part of the Luceco Group, the company opted for Sync Energy Pro Charger Twin Wall Mounted EV Chargers as being the best commercial EV charging solution for the increasing volume of use.

As Edward Vill, Electrical Operations Manager, Shield Mechanical Electrical & Facilities Services explained, “We already had single chargers but the ongoing move to electric, combined with increasing demand from visitors to the site meant that when we moved to new premises, a better and bigger solution was not only needed but with Sync Energy it was possible and practical.”

Twin Charger, WC2’s and load balancer

With twin Type 2 socket outlets, a backlit intuitive colour touchscreen, and built in 4G connectivity, MCB and MID metres as standard, the Sync Energy Pro Charger supports Monta QR code, RFID, Plug and Charge, and Payment Terminal Charging, if required.

The Pro Charger range features Twin Bollard EV Chargers, available with or without amenity lighting option, and Twin Wall-mounted Chargers. Both the wall-mounted and bollard options come with PEN fault detection, touchscreen, RFID, 4G connectivity, and an MID meter as standard. This comprehensive suite of features ensures that our chargers are not only user-friendly but also future proof, catering to a wide array of commercial applications.

The unique Balancer enables link up to 16 charge points dynamically to the building supply, ensuring no overload of circuits, protecting assets with a Stainless-Steel Crash barrier. The Sync EV Balancer is designed to ensure that the electricity supply is not exceeded by EV Charging.

When it comes to EV chargers, there is no allowance for diversity, so a 32A charger needs to always use 32A. When 2,3,4 chargers are added this soon adds up, which is where the Sync EV balancer comes in. The balancer is a hardwired

system for reliability and requires no subscription, its scalable for up to 16 charge points (16 duals gives you 32 charging bays), and it dynamically manages the available building power, distributing it evenly between the connected vehicles. Available in both single-phase up to 120A and three-phase up to 400A.

Edward continued, “Over and above the technical spec, we also liked the sleek look of the system and its user-friendly nature. We currently have key fobs open to all.”

Sarah Cox, Sync Energy’s Business Development Manager described the project. “Sync Energy’s service covers all the bases. We started with a site visit, assessment of needs, calculations on loading, before quoting and supplying with the help of Sync Energy distributor, Medlocks of Bristol. Sync Energy then supported both the install and commissioning.”

Sarah continued: “It was a real pleasure collaborating with Shield Electrical on its exciting new site. Together, we delivered sleek, user-friendly wall chargers that made it simple for them to power up their electric vehicles. It’s great to see sustainability in action, and I’m looking forward to continuing our support for Shield as well as enabling more forward-thinking projects like this in the future.”



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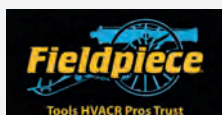
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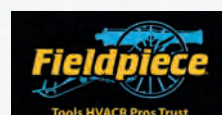
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