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

This month's edition is packed with valuable insight and industry updates, with a particular focus on the Future Homes Standard. We also feature practical guidance on retrofit, training and servicing, alongside a strong selection of compelling case studies from across the sector.

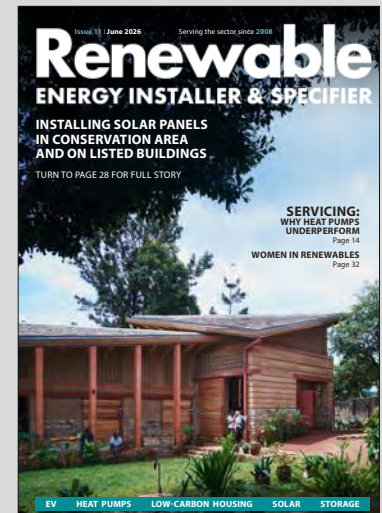
Last month, the Renewable Energy Installer team exhibited at Solar & Storage Live, where one key theme stood out above all others: the rise of the "Golden Triangle" - the growing integration of solar PV, heat pumps and battery storage, often combined with EV charging solutions. Increasingly, installers are expanding into these technologies in response to rising consumer demand for complete, integrated energy solutions.

We will also be exhibiting at The Installer Show next month, so please do visit our stand (5B70). We look forward to hearing your experiences and perspectives on this evolving trend within the industry.

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



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The case for home energy storage in a flexible-grid future

By **Jason Howlett**, CEO, Energy Storage Association

AT last, the UK is starting to think about a systems approach to energy. No longer obsessed by energy generation alone the planned expansion of the Demand Flexibility Service by National Energy System Operator (NESO), will reward households for using electricity during periods of excess renewable generation. Uniquely homeowners with energy storage systems are positioned to benefit the most from this change. The updated scheme, which now offers free or cheaper electricity during sunny, low demand periods creates a powerful incentive not just to shift when we use power, but to capture it for later use.

Turning surplus renewable energy into long term savings

Periods of excess electricity are becoming increasingly common as solar and wind generation grow. On bright summer weekends, the grid can produce more renewable power than it can use. While households are encouraged to run appliances during these windows, those with home batteries can go further:

- Store free or ultra cheap electricity when the grid is oversupplied
- Use that stored energy later, when prices rise
- Reduce reliance on fossil fuel backed peak time electricity
- Cut bills year-round, not just during flexibility events

For homeowners, storage transforms the scheme from a short-term reward into a long term financial and environmental strategy, whether they have installed solar to their own homes or not.

Why energy storage must become standard in new build housing

The UK is rapidly increasing rooftop solar installations. 2025 was the sunniest year on record, and small-scale solar hit new highs, but without storage, much of that clean energy is exported back to the grid at low value or wasted during oversupply.

The ESA has advocated that energy storage must form part of the Future Homes Standard

and by embedding storage into all new build homes would:

- Capture energy produced from the installed solar panel for later self-consumption
- Ensure new housing stock is future proofed for a renewable heavy grid
- Reduce pressure on local networks during peak times
- Allow households to benefit from free/cheap electricity events automatically
- Support national decarbonisation goals without relying on behavioural change
- Prevent developers from locking in outdated, grid dependent designs
- Help to reduce the total kVa needs for new developments and therefore bringing down costs

Just as insulation became a building standards requirement, battery storage is the next logical step for resilient, low carbon homes.

Supporting those who cannot afford storage

While homeowners with disposable income can invest in batteries, many cannot, including residents in social housing, people on benefits and households already struggling with energy costs.

If flexibility services are to be fair and effective, the benefits must be accessible to everyone.

That means:

- Government funded storage installations in social housing
- Grants or zero interest loans for low-income households
- Community scale batteries where individual systems aren't practical
- Tariff protections so vulnerable households aren't penalised for being unable to shift usage



- Introduce a salary sacrifice scheme for home renewable products to reduce the barrier of upfront costs for home battery systems
- Without support, the flexibility scheme risks widening the energy inequality gap: wealthier households will store free electricity, while others remain exposed to high peak time prices.

A smarter, fairer, more resilient energy system

The updated Demand Flexibility Service shows how quickly the UK's energy landscape is changing. As renewables grow and periods of surplus become routine, energy storage is no longer optional, it's essential infrastructure.

Homeowners who install batteries today are early adopters of a system the entire country will eventually rely on. But for the transition to be just and effective, storage must be built into new homes and made accessible to those who need it most. **REI**

Empowering a sustainable future with energy storage

esa-uk.org Energy Storage Association (UK)

ESA ENERGY STORAGE ASSOCIATION

Delivering quality new build installations under the Future Homes Standard

MCS (Microgeneration Certification Scheme), the UK's quality mark for small-scale renewables like solar panels and heat pumps, has welcomed the government's Future Homes Standard, which will mean that the majority of new homes in England from 2028 will have solar panels and low-carbon heating systems (such as heat pumps) by default.

AN Rippon, CEO at MCS, discusses what the Future Homes Standard could mean for industry.

Last year saw record-breaking numbers for small-scale renewables, with an MCS certified renewable installed every 90 seconds across 2025. This momentum has continued into 2026, with solar panels and battery storage seeing a particularly strong start to the year.

A key driver of recent growth has been the housebuilding sector, with 100,000 installations carried out on new builds in 2025 – 28% of all MCS certified installations. The Future Homes Standard is set to accelerate this demand.

What is the Future Homes Standard?

The Future Homes Standard is a change in Building Regulations that supports the government's commitment to achieving net-zero by 2050. It was first consulted on in 2019, with further consultations published to refine its requirements, which were finalised and published on 24 March 2026.

It means that all new homes must produce 75% less carbon emissions than those built to 2013 standards, so the vast majority will come with solar panels and low-carbon heating systems (such as heat pumps) by default from 2028; a clear commitment to the role of small-scale renewable technology in decarbonising UK housing stock.

The role of certification

Although MCS certification is not mandated under the Future Homes Standard, it's clear that housebuilders are already recognising the critical role that certification has to play in the newbuild market. It provides confidence to housebuilders that the technologies are being installed to industry-recognised standards and demonstrates a commitment to quality for their customers.

Installing to MCS standards complements Building Regulations and goes beyond minimum compliance to improve real-world energy efficiency outcomes. It is also often a requirement

Ian Rippon, CEO at MCS



for consumers to be able to access competitively priced energy tariffs, alongside the Smart Export Guarantee (SEG) which provides payment for excess generated energy that is exported back to the grid.

A unique opportunity

The Future Homes Standard is a great opportunity for the sector, particularly for MCS certified installers. As the demand for renewables in new builds grows, so too will the need for competent businesses to deliver these installations. MCS certification is a mark of quality that provides peace of mind, demonstrating that an installation business adheres to industry-recognised standards, is committed to best practice, and offers robust protections that go beyond the foundation required by policy.

The redeveloped MCS installer Scheme, which is rolling out over the coming months, has been shaped to support this growing demand. It puts consumer protection and quality at the heart of what we do, with certified installers playing a crucial role in helping to build long-lasting confidence in home-grown energy.

Looking ahead

As the industry prepares to deliver the Future Homes Standard and the £15 billion Warm Homes Plan, renewable energy installers will play a vital role to play in decarbonising UK housing stock. MCS certification is a mark of quality that helps installers to demonstrate they are committed to best industry practices and provide robust protections, and that will be critical in giving everyone the confidence they need to invest in these technologies.

To find out more about how to get your business MCS certified, you can access MCS' free interactive guide: www.mcscertified.com/installers/view-our-guide-to-certification REI



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What does the next 12 months look like for the off-grid heating sector?

By **Malcolm Farrow**, Director of Marketing and External Affairs at OFTEC

MAKING predictions in the heating industry is rarely a wise move but, as we look ahead, the landscape for off-grid decarbonisation is clearly starting to shift. It's already been an exceptionally busy few months for the sector.

We've seen the Boiler Upgrade Scheme (BUS) grant temporarily increase from £7,500 to £9,000 specifically for oil and LPG heated properties. Alongside this, the ongoing conflict in the Middle East continues to impact global energy prices, while Labour leadership challenges and the local election results are expected to lead to a rethink in certain policy areas.

Interpreting the government's signals

The recent increase in BUS funding is undoubtedly welcome news, helping to offset some of the additional costs that off-grid households face. However, we have to look at the wider context. This funding boost points to a likely underspend in the budget and a persistent lack of consumer uptake.

The government remains clearly committed to heat pumps, an approach OFTEC fully supports. We are seeing more and more technicians joining our registration scheme to upskill and install this technology. Yet, by increasing the grant specifically for off-grid properties, the government has publicly acknowledged an important reality: it is significantly harder and consequently more expensive for these homes to transition compared to those on the gas grid.

Encouragingly, policymakers have started to explore alternatives for these harder-to-treat homes. We expect these conversations to grow over the coming year. The current uncertainty is not helpful for anyone, and clarity on how these alternatives will be supported is urgently needed.

Listening to the voice of households

For everyday consumers, the ongoing cost of living crisis is drastically reducing their choices. Even with enhanced grants, the majority of households - and particularly those that most

need help with energy bills - simply cannot afford the high upfront capital spend required to install a heat pump.

Furthermore, there are practical barriers making homeowners hesitant. Current Building Regulations in England prevent the installation of a heating appliance that has the potential to produce more CO₂ than the one it replaces. This means installing a heat pump is effectively a one-way street. Households cannot revert to a liquid fuel boiler if they find the new system unsuitable for their property. This risk holds back many households who understandably have concerns.

In contrast, the public appetite for renewable liquid fuels is clear. The recent Alternative Clean Heating consultation received an incredible 16,000 responses from homes and businesses supporting these fuels. We've never seen such a positive response.

Additionally, the situation in the Middle East has highlighted that Hydrotreated Vegetable Oil (HVO) does not suffer from the same level of price volatility as kerosene, and the fuel does not come from the Middle East. Where heat pumps aren't suitable, HVO offers an alternative solution without the upfront costs and its initial deployment as a fuel blend could be rolled out to all existing users almost overnight. We expect consumer pressure for these pragmatic alternatives to continue to grow.

Increasing political pressure and policy debate

This consumer reaction is translating directly into political pressure. The recent local elections have demonstrated growing support in rural areas for third parties such as Reform and the Greens. Interestingly, they both offer very different perspectives on net zero.

This places increasing pressure on Labour to clearly define their approach and, most importantly, demonstrate the real world positives of their policies which households need to start feeling. This is a challenge the current Labour leadership contenders will have to address head on.

However, a new leader will not change the fundamental reality facing the country. The fact is there is a severe cost of living crisis and consumers have limited disposable income. At the same time the fabric of off-grid households less well-suited to heat pumps is not easy to overcome.

A pragmatic solution in uncertain times

At OFTEC, we have always believed in a technology neutral future. The fuel doesn't matter, what's important is a positive outcome for the consumer. That's why we support the rollout of heat pumps in suitable properties, but we also firmly advocate for renewable liquid fuels where households want to keep using their current heating system due to their individual circumstances.

Currently, the government's approach is not fully satisfying any of these approaches. We need absolute clarity allied to pragmatism so industry can invest in the technology and the skills it needs. We successfully won this argument for renewable liquid fuels with the previous Conservative government, but the general election and new Labour government led to a mini reset.

There is a very real risk that we could repeat history and waste another Parliament. **REI**



InstallerSHOW 2026:

A deep dive into the biggest and best show yet



INSTALLERSHOW 2026 arrives as a truly transformative event for the installation, trades and built environment sectors.

With 40,000+ visitors, more than 900 exhibitors, and 11 CPD-accredited live content streams across three action-packed days, this year's edition is shaping up to be the biggest yet – not just in size, but in breadth of subjects and practical value.

Visit the Renewable Energy Installer Magazine team on stand 5B70

More than a traditional trade show, InstallerSHOW 2026 combines hands-on demonstrations, future-focused discourse, international collaboration, and thousands of opportunities to strengthen skills, grow business and influence the future of heat, water, electrics and construction.

Here's a closer look at what some of the key themed zones and content areas have in store.

InstallerPLAZA

The InstallerPLAZA, found in hall 5, is unmissable for InstallerSHOW visitors.

Sponsored by Vaillant & Glow-worm, the PLAZA combines product launches, hot topics and debates, celebrity appearances, challenges, award winners, live entertainment and more.

Don't miss out on the buzz of the PLAZA, which captures the spirit of the event: collaborative, professional and always focused on the biggest topics affecting the heating and plumbing sector.

InstallerBUILD

InstallerBUILD has emerged as one of the show's most dynamic areas. This dedicated space for builders, roofers, carpenters, flooring installers, kitchen fitters and RMI professionals' doubles down on real-world issues like safety, sustainability, retrofitting and practical innovation.

InstallerBUILD is more than a collection of exhibitors – it's a live learning experience. At



its centre is The HAUS, a full-scale, two-storey demonstration build designed by award-winning architects and assembled with regenerative materials that debuted at the show last year. It is back in 2026 showcasing circular material systems, resilient construction methods, and modern insulation and cladding solutions.

Visitors can expect:

- Expert demonstrations from top manufacturers and suppliers.
- Building Safety Forum tackling the latest safety regulations, materials compliance and industry best practice.
- NHIC Knowledge Hub, with a focus on building safety, competence and training for those trades delivering retrofit and home improvement to the UK.
- FITA flooring demos and competitions spotlighting craftsmanship and innovation.

- Brand Ambassador Hub – sponsored by ITS – is a bustling multitrade networking space featuring all your favourite tradespeople.
- Roofing demos from NFRC and SIG Roofing.
- Bricklaying competition Super Trowel hosting a regional heat LIVE at InstallerSHOW.
- A heritage trades showcase, with live demos from stonemasons and those working on preserving traditional buildings.
- The Kitchen Fitter Arena – sponsored by Howdens – with talks and demos for the installers delivering top notch kitchens.

This combination of hands-on learning and exciting showcases makes InstallerBUILD a must-see for any forward-thinking tradesperson focused on the latest products, solutions and building methods, and innovative ways to grow their businesses.

InstallerELECTRIC

Electrical trades, renewables and evolving smart-tech landscapes are a cornerstone of InstallerSHOW. Under the InstallerELECTRIC banner, this area brings:

- Electrical system manufacturers and suppliers showcasing the latest in wiring, distribution, automation, EV charging, smart home integration and renewable energy interfaces.
- Live product demos, giving sparky professionals the chance to see new tools and solutions in action.
- Expert talks on upcoming regulations, safety protocols and skill development – all critical as electrics become more integrated with energy and building-management systems.



This area isn't just about tools; it's where electrical professionals can prepare for future demands – from electrification to energy optimisation.

World Plumbing Conference

For the first time ever, the World Plumbing Conference will be hosted alongside InstallerSHOW, making 2026 a landmark event for the global plumbing community.

In collaboration with the World Plumbing Council and the Chartered Institute of Plumbing & Heating Engineering (CIPHE), the conference gathers global leaders, innovators and policymakers to address the sector's biggest challenges under the theme Worldwide Problems – Global Solutions.

Key areas of focus include:

- Skills development to tackle workforce gaps and elevate professional standards.
- Supply chain resilience and conservation strategies for water and material sustainability.
- Sustainability in plumbing technologies and techniques.
- Public protection, including tackling risks like Legionnaires' disease and non-compliance hazards.

Kitchen Fitter Arena

Kitchen installation has become one of the most competitive and technically demanding areas in the trades. In response, InstallerSHOW 2026 includes an expanded Kitchen Fitter Arena, delivered in partnership with Howdens. REI





This arena focuses on hands-on workshops, live demonstrations and installer-led sessions designed for real-world kitchen projects. Sessions will cover installation best practices, practical solutions for site challenges, and business growth insights for kitchen installers.

A standout feature is the inclusion of the first-ever Kitchen Ambassador Hub, guided by an expert team of industry ambassadors including names like Gavin Tutton, Andy Snelson, Tom Easter, Emily Kitchin and Victoria Priozzolo. These ambassadors bring deep trade experience in kitchen design and installation, helping visitors explore:

- Tips and tricks for efficient workflow on site.
- Advice on choosing materials, fixtures and appliances.

- Guidance on business strategy, pricing and client engagement.

This arena promises to be one of the most content-rich areas for installers looking to sharpen their craft and grow their business acumen.

Brand Ambassador Hub

InstallerSHOW's Brand Ambassador Hub – in partnership with ITS – is a dynamic gathering point where influencers will connect with our visitors.

As well as grassroots conversations about the issues that matter most to tradespeople, this area will feature Top Picks for 2026, which as the name suggests, will highlight the products and solutions to watch out for this year.

Why InstallerSHOW 2026 Matters

InstallerSHOW 2026 isn't just another exhibition; it's a three-day extravaganza of trade disciplines, business growth opportunities, and future-focused thinking. The addition of co-located events like the Painting & Decorating Show and Professional Woodworking Expo, alongside the global platform of the World Plumbing Conference, means three days packed with learning, inspiration and new pathways for professional advancement.

If you're an installer, builder, carpenter, electrician, decorator or business owner connected to any aspect of installation or the built environment, InstallerSHOW 2026 promises to be the most practical, innovative and rewarding edition yet.

For more information and to get your free tickets, head to www.installershow.com REI



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Grid reform in the UK: A generational opportunity for renewables

By **Henry Mawhood**, Senior Surveyor in the green energy and sustainability team at Fisher German

THE UK's electricity grid is at a tipping point. Record demand and a 95% clean power target by 2030 have pushed the grid queue to 700 GW which is far beyond current capacity and has highlighted the scale of the challenges ahead.

Ofgem and the new National Energy System Operator (NESO) are driving reforms to unlock connections, clear bottlenecks and give developers, investors and communities the confidence to move forward. With hundreds of so-called "zombie projects" and renewable deployment outpacing grid capacity, action is urgent.

Henry explores the challenges and opportunities emerging as the UK rewires its energy future to define investment, innovation and the path to net zero for decades to come.

Having spent years navigating renewable energy projects, I have seen first-hand how grid constraints stifle innovation and investment.

The current grid queue, with over 700 GW of power awaiting connection and lead times stretching up to a decade, is not fit for purpose.

A lack of transparency and clarity leaves developers and investors in limbo. Reform must confront both technical and commercial realities, building confidence among all stakeholders.

Challenges necessitating reform

A surge in applications for grid connections, from large-scale solar farms to community rooftop projects, has created a backlog. Many sites are stalled due to insufficient capacity or unclear timelines.

This bottleneck threatens progress towards clean energy and risks undermining investor confidence at a pivotal moment.

Constant planning delays, supply chain shortages particularly in transformers and cabling, and policy uncertainty are compounding these issues, making it difficult for even well-prepared projects to move forward.

Key changes and their impact

The government's grid reform programme, led by Ofgem and NESO, is a decisive move. By restructuring the grid queue, prioritising projects that are genuinely ready to proceed and removing "zombie" applications, the reforms promise to unlock stalled investments and bring clarity for developers.

Addressing regional disparities is crucial. Reforms must ensure growth is not confined to a few areas, but spread nationwide, enabling solar, wind and emerging technologies to flourish across the UK.

Sector challenges: Planning, supply chain, and investor uncertainty

Grid constraints are only part of the picture. Persistent planning delays can derail even the most promising projects. Supply chain disruptions, especially shortages of critical equipment, add further complexity. For investors, uncertainty around connection timelines and returns remains a significant barrier.

Overcoming these challenges will require coordinated action from government, industry and local authorities alongside reforms that foster transparency and predictability.

Opportunities: Solar, rooftop, regional and emerging segments

Despite the challenges, the potential for renewable energy has never been greater. Modernising the grid will unlock investment in utility-scale solar power and spark a rooftop revolution, creating opportunities in regions that were previously overlooked.

Battery storage and flexible technologies are growing rapidly, while emerging segments such as car park solar, agrivoltaics and floating solar offer



even more ways to diversify and maximise returns.

The pathway to 95% clean electricity by 2030 is ambitious, but achievable with bold action and collaboration.

Focus for developers and investors

For developers and investors, early engagement with grid operators and local authorities is critical to secure connections and address potential planning risks.

Prioritising projects with clear timelines and robust supply chains can help mitigate delays, while exploring opportunities such as car park solar and leveraging new technologies can maximise value.

It is equally important for the sector to advocate for transparent and equitable grid reform, ensuring its voice is heard in policy debates.

The coming decade will be defined by how effectively the UK modernises and reforms its electricity grid.

With the right policies and collaboration across industry, there is an opportunity to unlock a generational shift in renewable energy, driving economic growth, energy security and environmental stewardship.

Looking ahead to 2030, there is every reason for optimism. Decisive action today will lay the foundations for a future-ready energy system, capable of delivering on the country's net zero ambitions and supporting a sustainable energy transition for decades to come. **REI**



National Retrofit Hub publishes practical guidance to support place-based retrofit delivery across the UK

The National Retrofit Hub (NRH) has published a new guidance document, *Place-Based Retrofit in Practice: Guidance for Developing a Place-Based Retrofit Strategy*¹, offering practical support for people delivering retrofit at a local level.

DEVELOPED in collaboration with the UK Green Building Council and the Energy Demand Research Centre, with funding from The MCS Foundation, the resource responds to a growing need for clearer, more grounded approaches to place-based delivery.

National policy, including the Warm Homes Plan, Pride in Place Strategy and wider devolution agenda, is placing greater emphasis on local leadership. Yet while place-based retrofit is widely referenced, there is still limited shared understanding of what it involves in practice.

This creates a risk that programmes are labelled as place-based without delivering meaningful outcomes. At the same time, many local authorities, community organisations and delivery partners are already demonstrating what strong place-based approaches can look like, often without clear support or routes to scale.

This guidance follows the publication of the project's first resource: Understanding Place Based Retrofit, which sets out a shared understanding and builds consensus on principles for, and outcomes that can be delivered by, place-based approaches.

A practical guide for local delivery

The guidance is designed for those working on the ground, including local authorities, housing associations, community organisations and retrofit facilitation providers. It brings together real examples and practical steps to support the development of place-based strategies.

Drawing on case studies, research and engagement across the NRH network, the document sets out:

- How place-based retrofit is being delivered in practice
- The role of partnerships and local insight
- Steps to develop a place-based strategy
- Approaches to engaging communities and supply chains
- Considerations around delivery and finance

Rather than presenting a single model, the guidance reflects the diversity of local contexts across the UK. It recognises that effective retrofit depends on collaboration between multiple actors, not a single organisation acting alone.

Rachael Owens, Co-Director at the National Retrofit Hub, said:

"Place-based retrofit is often talked about as a solution, but many organisations are still working out what it means in practice and how to apply it in their own area. This guidance brings together the experience of those already doing this work, alongside practical steps to support others to get started or build on what they are doing. We hope that this tool can be used collaboratively by organisations and individuals coming together to design and delivery retrofit strategies for their place.

If retrofit is going to deliver long term value, it needs to reflect the realities of different places and involve the people and organisations who understand them best. This guide aims to help you do just that."

Bridging the gap between ambition and delivery

The guidance responds to findings from the National Retrofit Hub's State of the Nation review, which highlighted that retrofit is not being delivered at the scale or quality required to meet national targets. It also identified low levels of citizen engagement and missed opportunities to deliver wider benefits such as health, resilience and local economic value.

The guidance emphasises the importance of understanding retrofit as part of a wider system, including residents, supply chains and local context. It also highlights the limitations of approaches focused only on short term outputs such as EPC ratings or carbon savings.

Supporting the next phase of delivery

As responsibility continues to shift towards local actors, there is increasing demand for practical tools to support strategy and coordination. This resource is intended to support that transition, helping organisations move from isolated projects to more joined up, place-based programmes.

The guidance forms part of a wider programme of work exploring how place-based approaches can be developed and scaled across the UK.

To support the launch, the National Retrofit Hub will host a webinar on 5 May 2026 titled What does Place-Based Retrofit Look Like in Practice? The session will introduce the guidance and include contributions from organisations involved in case studies featured within the document. [REI](#)

Access the guidance:

1. Place-Based Retrofit in Practice: Guidance for Developing a Place-Based Retrofit Strategy
<https://tinyurl.com/y6h7ywwj>



**NATIONAL
RETROFIT HUB**

Why installed Heat Pumps underperform and the Role of servicing in system efficiency

By **Daniel McCowan**, Director ServiceMy

H EAT pump installations have increased quickly across the UK over the last few years. With funding support and a wider push towards low carbon heating, more systems are now being installed across homes, housing stock and commercial buildings. While that growth is positive, it is becoming clear that not all systems are performing as expected once they are in use.

From a servicing point of view, there is a noticeable gap between installation and how systems perform over time. Many systems are running, but not efficiently. Some struggle to heat properties properly, others run at higher costs than expected, and some operate continuously without delivering the level of comfort the customer was expecting. In most cases, the heat pump itself is not the problem. It is the wider system around it.

Why heat pumps underperform on site

One of the most common issues found when attending properties is emitter sizing. Radiators are often too small for low flow temperature systems, particularly in retrofit homes where existing emitters have been retained. The system may eventually reach temperature, but it does so slowly and has to work harder to get there. This often leads to higher flow temperatures being used to compensate, which reduces efficiency and increases running costs.

Heat loss assumptions are another factor. If the original calculations do not reflect the actual condition of the property, the system can be undersized from the outset. This becomes more noticeable during colder periods, where the system has little capacity to deal with increased demand.

Flow temperature settings also play a key role.

Improving heat pump performance requires a joined-up approach. Installation, commissioning and servicing all play a part.

Many systems are left on fixed flow temperatures rather than being set up with weather compensation. This means the system continues to run at the same output regardless of external conditions. During milder weather, this results in unnecessary energy use, while colder conditions can expose the system's limits.

Controls are another regular issue. It is not unusual to find zoning that does not reflect how the property is used, thermostats positioned in poor locations, or schedules that do not match occupancy patterns. In some cases, controls are present but have not been set up correctly, or the end user has not been shown how to use them. These issues are often overlooked at handover but have a direct impact on both comfort and efficiency.

Commissioning can also vary. While systems may be signed off, the level of detail in commissioning is not always consistent.

Flow rates may not be fully balanced, and system settings may not be fine-tuned to suit the property. This can leave the system operating below its potential from the start.

There are also cases where several smaller issues combine. Individually they may not cause a major problem, but together they result in a system that does not perform as expected. This is a common scenario where no single fault stands out, but the overall performance is poor.

What this means for the end user

For homeowners, these issues tend to present in similar ways. Rooms not reaching temperature, particularly on upper floors. Systems running for long periods without achieving the desired result. Higher than expected energy bills. Or uncertainty around whether the system is working as it should.

This often leads to frustration, especially where expectations have been set around efficiency and running costs. In many cases, the heat pump itself is blamed, when the issue lies elsewhere within the system.

For landlords, housing providers and facilities management companies, the impact is more operational. Increased call outs, repeat visits and ongoing complaints can put pressure on maintenance teams. Without properly identifying the cause, these issues can continue over long periods and lead to unnecessary costs.

The role of servicing

Servicing is often treated as a routine requirement, focused on checks and basic maintenance. In practice, it should be used to assess how the system is performing and make adjustments where needed.

A well carried out service goes beyond standard checks. It includes reviewing flow temperatures, checking control settings, and assessing how the system is operating over time. This helps build a clearer picture of whether the system is working as intended.

Servicing is also an opportunity to identify smaller issues early. A minor imbalance, incorrect setting or small fault can affect performance if left. Addressing these during a service



visit can prevent them from developing into larger problems.

Another important part of servicing is engaging with the end user. Heat pumps operate differently to traditional heating systems, and not all customers are familiar with how they should be used. Simple guidance around controls, scheduling and expectations can often resolve issues that might otherwise result in further call outs.

Servicing also allows for performance checks against the original design. If the system is not operating within a reasonable range, further investigation can be carried out.

A more proactive approach

There is still a tendency within the sector to respond to issues once they have been raised by the customer. By that point, the customer has already had a negative experience.

A more effective approach is to review systems regularly and make adjustments over time. This helps keep systems running efficiently and reduces the likelihood of problems developing.

For larger portfolios, such as housing associations or facilities management contracts, this approach can make a noticeable difference. Fewer reactive call outs, improved system performance and better customer satisfaction all contribute to smoother day to day operations.

It also allows for trends to be identified across multiple properties. If the same issue is being seen repeatedly, it can be addressed at a wider level rather than on a case-by-case basis.

Closing the gap

Improving heat pump performance requires a joined-up approach. Installation, commissioning and servicing all play a part.

Getting the initial design right is important, but it is equally important to review how the system performs once it is in use. Servicing provides that opportunity and helps ensure the system continues to operate as intended.

There is also value in feeding back what is found on site. Common issues identified during servicing can help improve future installations and reduce repeat problems.

Conclusion

Heat pumps can deliver reliable and efficient heating, but only when the full system is set up and maintained properly. The issues being seen across many properties are generally related to system design, commissioning and operation, rather than the heat pump itself.

Servicing should be used to maintain and improve performance, not just to carry out basic checks. With installations continuing to increase, making sure systems perform properly in real conditions will be key to maintaining confidence in the technology and supporting wider adoption across the UK. **REI**

Installers are not lazy They are overloaded

By Neil Briscoe, Founder, xenscope

THERE has never been more money on the table. The Warm Homes Plan is putting fifteen billion pounds into upgrading five million homes by 2030, with the government talking openly about tripling rooftop solar. The Warm Homes Local Grant has another five hundred million pounds behind it for England alone. ECO4 is still running until December. The Boiler Upgrade Scheme is paying seven thousand five hundred pounds per heat pump.

The money's there. The households are there. So here is the question that should keep the whole sector awake. Why is delivery still moving at a crawl?

The official numbers tell the story. By the end of February 2026, the Warm Homes Local Grant had delivered around one thousand measures across just five hundred and eighty homes. Solar PV was forty percent of that. The same scheme has to reach hundreds of thousands of homes by 2028. The gap between the policy and the front door is what the next four years will be judged on.

Where does the blame lie?

Most of the blame lands on the wrong people. Skills shortages get the headlines. Compliance gets second billing. Both are real. But there is a quieter problem nobody wants to name. Small installer businesses are being asked to carry a load they were never built for.

Think about a typical week. You work out which households might qualify for which scheme. You build a list. You design a leaflet. You manage a website. You run paid social. You pay for leads that turn up cold, unqualified, and often already shopped around three other firms. You survey, quote, install, certify, evidence, report. Then you start the whole thing again.

The surveys say the same thing across technologies. Among heat pump installers, sales and marketing is the top skill gap, rising to twenty eight percent in firms with six or more staff. The picture in solar PV will ring true to anyone in that trade. Paid leads, low conversion rates and lead recycling have been a daily moan for years. Nesta says only twenty seven percent of newly qualified heat pump installers actually complete an installation within a year of training.

The training is not the problem. The route from trained installer to a steady book of qualified work is.

This isn't laziness. It's overload. If you are running a small installer business with two staff and three crews on the road, you can't also be a marketing department, a data analyst and a copywriter. Being asked to do all of that, and then blamed when delivery slips, is unfair on you and bad for the country.

What would a better model look like?

It starts with targeting. Authorities and supply chain partners pick out the right households at property level, using live data on energy cost, tenure, fuel type and property suitability. No more guessing from postcodes. No more gambling on paid leads. The right doors in front of your van. Marketing as a service the supply chain pays for once and shares across many installers, rather than a tax every small business pays alone.

Then the boring middle. The list. The print. The post. The tracking. The qualified enquiry handed back to you in a form you can act on. None of it is glamorous. All of it is needed.

This isn't a new idea. Most sectors that lean on small business delivery already do it. Field sales operations support local dealers. Pharmacy networks support independent pharmacists. Renewables is the outlier here, not the rule.

The Warm Homes Plan will be judged on whether five million homes are upgraded by 2030, and on whether the rooftop solar promise lands in real households rather than press releases. Both targets are doable, but only if the industry takes an honest look at what you can reasonably do, and what needs to be done for you. The current model expects you to be marketers. You're not. You never were. You are tradespeople, and the policy depends on you.

You told the sector the technology was getting better. It listened. Now you're telling us where the real bottleneck is. Time to listen again.

We listened. **REI**

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Welcome to the 2026 Energy Race: Three breakthroughs that will define the next superpower

By Carol Johnston, VP Industries, Energy, Utilities, and Resources, IFS

As utility companies across the globe compete to secure cleaner and more resilient energy systems, the ability to produce, distribute, and protect clean and reliable energy has become a defining measure of strength. Leaders across the Energy, Utilities, and Resources (EUR) sector find themselves at a turning point, where success now depends on aligning technology, policy, and operational agility in ways that can keep pace with rapid change.

It's sparked what many see as a global race to become the world's next energy superpower. With timelines tightening and expectations rising, the decisions made now will shape energy systems and global power dynamics, for decades.

There are three key developments set to transform the EUR landscape—the rollout of small modular reactors capable of delivering carbon-free power with greater flexibility and safety, the expansion of Advanced Metering Infrastructure, which allows consumers and providers to jointly monitor and manage energy use, and the growing potential of geothermal energy sourced from beneath the Earth's surface

Here's how they are poised to take shape in 2026 and beyond:

1. Small but mighty – the rise of small modular reactors delivering big impact

As the world hurries toward net-zero emissions, the energy sector faces a daunting challenge: how to replace fossil fuels with scalable, reliable, and clean alternatives. Enter Small Modular Reactors (SMRs), compact nuclear power plants designed to deliver firm, carbon-free energy with unprecedented flexibility and safety.

SMRs offer a path to cost-competitive, scalable, and clean baseload power, bridging the gap between intermittent renewables and aging fossil infrastructure. SMRs could become an essential element

of a resilient, decarbonised energy future.

Their promise has spurred global market growth, with the global SMR market projected to grow from \$4.1 billion in 2025 to between \$40–50 billion by 2035. Even some big tech players are exploring how SMRs can power AI data centres with clean, reliable energy.

What's a global superpower race without hurdles? Despite the potential, SMRs face significant hurdles. For example, long ROI timelines require innovative funding models and safety and waste management concerns remain an issue. Along with supply chain immaturity and regulatory complexity posing challenges.

But, here to provide a digital backbone is IoT and supervisory control and data acquisition (SCADA), enabling real-time monitoring of reactor conditions and asset health, while AI-driven insights forecast equipment failures and optimise maintenance schedules. With project lifecycle management providing end-to-end visibility across engineering, procurement, construction, and commissioning phases. Enhancing operational efficiency, safety, and regulatory compliance for SMR deployments.

2. The year that the utility grid gets smart – welcome IoT

As we move further into the 21st century, the integration of IoT (Internet of Things) into utility grids is set to revolutionise the energy sector. Already, microgrids and decentralisation are becoming the norm and localised energy systems are enhancing resilience and enabling peer-to-peer energy trading, the integration of IoT is set to take this one step further, forming "smart grids".

Driven by rising energy demand and electrification such as EVs and renewable energy, government initiatives for grid modernisation, a need for grid resilience and reduced transmission losses, and regulatory pressure for sustainability and efficiency—the introduction of IoT is more than just a technological upgrade, it's a transformation that will redefine how we generate, distribute, and consume energy.

It's a market poised for significant growth! With the global smart grid market expected to grow from \$73.3 billion in 2024 to \$269.5 billion by 2033, at a CAGR of 15.6%. IoT in utilities is projected to reach \$40.87 billion by the end of 2025, growing at a CAGR of 11.3% through 2033.

It won't be plain sailing, but challenges present opportunities

The road to IoT led utility grids holds its own set of challenges. Policy fragmentation and regulatory uncertainty remain significant barriers in some regions. Workforce shortages in technical and data science roles may also slow implementation and cybersecurity is a growing concern as grid operations become increasingly digital.

However, these challenges also present opportunities. Through advanced metering infrastructure (AMI), an integrated, fixed-network system that allows two-way communication on both the utility and customer sides of the meter, customers are encouraged to manage energy more efficiently, with integrated billing and real-time usage data. Consisting of home area networks, in-home displays, energy management



Carol Johnston, VP Industries, Energy, Utilities, and Resources, IFS



systems, smart meters, communications networks, and data management systems, AMI has become a key component of IoT led grids. Beyond this, AI and IoT are enabling real-time load forecasting, predictive outage prevention, and automated diagnostics, making grid operations more efficient and reliable.

The triple threat making it possible: AI, IoT, and Automation

A successful transformation requires a holistic approach to end-to-end asset lifecycle management that spans traditional generation, transmission, distribution and decentralised energy resources (DER).

Several key technologies are driving the transformation of utility grids. Grid-edge software and DER integration facilitate

decentralised control, predictive maintenance, and consumer participation in energy markets. Vehicle-to-Grid (V2G) technology is expected to see exponential growth post 2028, allowing electric vehicles to supply energy back to the grid during peak demand.

3. A look below the surface: How geothermal could transform clean energy

Geothermal power is emerging from the shadows. Long overshadowed by solar and wind, geothermal energy is now poised to become a cornerstone of global electricity and heating systems.

Geothermal energy is a renewable energy source harnessed from the thermal energy stored in rocks and fluids deep within the earth's crust. It's a scalable, clean, and politically viable solution to the world's energy challenges. REI

A successful transformation requires a holistic approach to end-to-end asset lifecycle management

With the right policies, investment, and public awareness, it is poised to become a key factor in a resilient, low-carbon grid. According to the International Energy Agency (IEA), geothermal could technically meet humanity's electricity needs 140 times over.

The outlook is promising – but upfront costs still stand in the way

The promise of geothermal is huge, but its high upfront costs, long development timelines, and permitting complexity, especially in environmentally sensitive areas, have limited investor appetite. However, costs are falling and McKinsey projects levelised costs could drop to \$45 - \$65/MWh over the next decade, driven by drilling efficiencies, better resource mapping, and scaled equipment supply chains.

Next-generation technologies such as Enhanced Geothermal Systems (EGS) and

Advanced Closed-Loop Systems (ACLs) are unlocking geothermal potential in places previously deemed unsuitable. These innovations allow developers to tap heat from deep, dry rock formations, virtually anywhere on earth. Techniques honed during the shale boom, like horizontal drilling and hydraulic fracturing, are now being repurposed to unlock clean energy from deep rock.

When paired with world-class Enterprise Asset Management (EAM) for tracking geothermal assets throughout their entire lifecycle from investment planning, through construction, operations, and ultimately decommissioning.

Beyond there, AI solutions can provide predictive analytics and real-time asset performance monitoring, while Field Service Management supports field crews with inspections, maintenance, and outage response. All while tracking emissions and enabling sustainability reporting.

Leaders or laggards? The global superpower race will decide

As IoT-enabled grids, small modular reactors, and next-generation geothermal technologies shift from concept to real-world deployment, success will depend on how effectively organisations can synchronise technology, regulation, and operational performance. For the energy, utilities, and resources sector, 2026 will be a defining year—one where investment choices, strategic direction, and organisational agility will determine which players pull ahead and which fall behind. REI

Helping Installers Run Smarter, More Controlled Renewable and Electrical Operations

As renewable and electrical projects continue to increase in scale and complexity, installers are facing growing pressure to deliver work efficiently while maintaining compliance, visibility, and operational control across every stage of delivery.

FROM EV charging and solar PV to battery storage, heat pumps, and wider electrical works, many businesses are now reassessing how field operations are managed. Fragmented systems, manual processes, and disconnected compliance workflows can create delays, increase admin, and reduce visibility across live projects - particularly as installation volumes grow.

At **Shocking Energy**, the focus is on helping installers run smarter, more controlled field operations through AI-driven field service automation designed specifically for the electrical and renewable sectors.

A key part of this is Safe Isolation Provider (SIP) accreditation. Traditionally, contractors have often relied on third parties for isolation, reconnection,

and supplier or DNO notifications, introducing additional coordination challenges and reducing scheduling flexibility. SIP enables approved organisations to manage these activities directly, helping improve project control, reduce dependency on external providers, and streamline renewable installation delivery.

Alongside accreditation support, Shocking Energy's **JobWay.ai** platform brings together guided workflows, digital job management, evidence capture, audit trails, compliance messaging, and operational reporting within a single connected system. Engineers can capture site information directly in the field, while operational teams gain real-time visibility across projects, compliance activity, and workforce performance.

AI is used in a practical way to help reduce



administrative workload, improve consistency, and standardise operational processes. RAMS and compliance documentation, for example, can be generated using structured templates and live site data, creating faster, more consistent, and fully auditable documentation across electrical and renewable projects.

As the industry continues to evolve, installers are increasingly looking beyond standalone tools and individual workflows toward integrated systems that provide greater operational control, clearer evidence, and smarter ways to manage field delivery at scale. REI

To learn more about Shocking Energy and JobWay.ai, visit shocking.energy.

 shockingenergy

Let's organise our own Heat Pump Show they said... how hard can it be?!?

Stick to what you know, if it ain't broke don't fix it, you can't teach old dogs new tricks... these are all things people could have said about Midsummer - one of Britain's leading solar PV and renewable energy tech wholesalers - when we decided to organise the biggest renewable heat event in the UK.

Well, first of all, we're not that old thank you very much! In fact, we think that part of our nationwide success is down to the same youthful attitude that led us to organise The Heat Pump Show in the first place: we were of the opinion that the renewable heating landscape in the UK was in need of some TLC so we set about preparing the menu.

Let's start with the trade shows, because the problem we found is not unique to us. Each year, we would sign up alongside all the other exhibitors and even more attendees to one trade show after another, paying more and more to be one stand among hundreds of others. We struggled to find the right products and the right people without accidentally also finding ourselves draped with 83 tote bags, carrying 200 flyers, and cramming yet another pastry into our mouths. OK, the pastry was good, but you get the idea! Finally last year, when a Bathroom Installation section popped up next to us, we felt that enough was enough. This wasn't the right place to champion renewable heat.

What we needed was a dedicated trade show - no padding, no waffle, just the stuff you actually need to know from the voices and brands leading the industry. Until now, this simply didn't exist.

Enter The Heat Pump Show

On the 22nd April 2026 over 800 installers, industry experts, manufacturers, wholesalers, publishers, and more came together for a fantastic day dedicated exclusively to renewable heat. Industry giants talked tariffs, heat pump system design, BUS grants, and everything in



between - one of our valued speakers summed it up better than we could: "Great conversations with some brilliant voices across the industry." Thank you **Aimee Holloran**, and see you next year!

For the installers present, it was a chance to look at the technology in a way that relates to real installs, not just spec sheets. Heat pump system design and installation comes with its own unique set of challenges, and installers are having to learn quickly. Systems need to work in homes that weren't initially designed for them. Customers are trying to make sense of mixed messages on cost and performance while wading through misinformation and uncertainty. Without the right support and guidance grounded in what installers experience on a day-to-day basis, the heat pump revolution will struggle to get off the ground.

And that's the real reason we organised the show. Sure, it gave us at Midsummer a

fantastic opportunity to connect with our customers and sure, it feels great to be able to boast about the star-studded lineup of speakers (don't worry, we played it cool when **Graham Hendra** told us it was his "favourite heat pump event"). But mainly it was a long-overdue opportunity for everyone in the industry to get together for the shared purpose of scaling renewable heat across the UK. The real proof of concept was seeing the conversations, connections, and sharing of ideas that had begun at the show spilling out to drinks afterwards where panellists and attendees alike were "putting the world to rights and sharing honest thoughts on where our industry is heading." This was an event that needed to happen.

So, we'd like to say a massive thank you to everyone who exhibited, spoke at, attended, or otherwise supported the event. The response on the day was beyond our wildest expectations, and we're so pleased to have been able to facilitate it. We hope to see you all next year, and in the meantime if you are interested in the products you saw at the show, have any questions, or simply want to know when the next event will be sign up to an account at midsummerwholesale.co.uk and meet some of the people who made The Heat Pump Show happen. **REI**

"Tell you what... the Heat Pump Show was absolutely brilliant. I can only imagine it'll be twice the size next year." - **Sean Hogan**

Powering Up at Speed: The Three Fundamental Pillars of EV Fast-Charging Infrastructure

By **David Pownall**, VP Power Systems,
Schneider Electric UK&I

As the UK sets its sights on net zero, it's vital we step up the pace when it comes to decarbonising the vehicles on our roads. Our transport sector accounts for around one fifth of total UK emissions and this has to change. Indeed, the Climate Change Committee projects reductions in transport emissions by over 80% from 2023 levels are needed by 2040.

Electric vehicles are becoming a cornerstone of sustainability, delivering the same everyday usefulness as conventional road transport but with significantly lower emissions. Alongside the rise of electric passenger cars, companies in industries such as freight, logistics and delivery are rapidly expanding fleets of larger EVs, everything from HGVs and vans that move goods and materials to buses that transport people.

All of these medium- and heavy-duty vehicles need dependable charging and there are several ways to provide it. En-route charging hubs enable quick top-ups during a journey, for example while a delivery driver takes a mandated break. In contrast, larger depot charging sites, such as at bus stations or major warehouses, support longer charging sessions, typically scheduled at the start or end of routes.

To meet the demands of the electrification of transport, the charging infrastructure will have to develop rapidly in the coming years. The UK is expected to need dedicated HGV charging points by 2030, especially with 15% of fleets planning full EV transitions by 2035. dedicated HGV charging points by 2030, especially with 15% of fleets planning full EV transitions by 2035.

The challenges

But the challenge isn't just about the numbers of chargers. Heavy vehicles require considerably more electricity to charge than their lighter counterparts (a large en-route truck charging depot could consume upward of 10MW, as much power as two or three villages). This, alongside the need to support extensive fleets with complex movements, makes the task of charging larger EVs both technically and logistically complex.

In order to power up our EV charging infrastructure, there are three fundamental pillars we must consider.

Pillar 1. A Reliable Service Starts with Strong Physical and Digital Infrastructure

The specific issues will vary across sites. En route charging hubs, for instance, need to prioritise delivering a fast and dependable service for vehicles stopping off there. At depots, there is usually more time – but also more vehicles and charging points. The challenge at these facilities then is less about pure speed and more about managing schedules and power use effectively. But given the size of some fleets, the amount of power they require and the time pressures they face, achieving a rapid rate of charging is still an important consideration.

Ultimately, all operators of EV fast-charging infrastructure must be able to provide large quantities of electric power to substantial numbers of vehicles, all running to tight



itineraries – and do this consistently, efficiently and reliably. The high-power charging equipment itself is only one part of the picture. To meet the significant challenges they face, it's just as important for providers to think carefully about the electrical and digital systems that underpin their facilities.

The sheer quantity of power required is one of the most important factors to consider. Many fast-charging sites will need to draw multiple megawatts, which will have major implications for electrical infrastructure and grid connections. Securing reliable uptime is also a critical concern because a problem that causes a shutdown can completely upend a charging site's operations – causing queues and delays that in turn disrupt the essential services these heavy-duty commercial EVs are providing. Providers also need to be able to operate their equipment efficiently, getting the most from it to ensure good value from their considerable capital and operational spending.

Pillar 2. Trusted Equipment, Efficient Delivery and Agile Load Management Are Key

EV fast-charging facilities need to incorporate high-performing equipment into an efficient, innovative design. They need to manage this

architecture cost-effectively and deliver its power optimally. These challenges are considerable – but with the right infrastructure, it's possible to respond to them convincingly.

Firstly (and fundamentally), it is important to consider how to best organise the equipment into optimal electrical systems to build robust, flexible power infrastructure to suit individual needs. This can include modular and packaged equipment to minimise layouts and allow scale up as needed. Advanced technology can also be introduced to boost performance and prepare for future demands. Some sites may benefit from battery storage, on-site generation or a microgrid to help match power supply with demand over time and reduce dependence on the main grid. Others may want to explore direct current (DC) based architectures, using Solid State Transformers – which support higher voltage distribution, allowing better efficiency at higher power.

Secondly, it is vital to manage this infrastructure efficiently. By attaching IoT-connected sensors to electrical equipment and analysing the data these provide using advanced, AI-powered modelling, it is possible to obtain a detailed view of the health and performance of power systems. This supports a more proactive approach to electrical asset management – allowing fast-charging operators to identify emerging issues early and tackle them before they lead to incidents and outages. In this way, businesses can improve performance, reduce downtime, optimise maintenance schedules, and extend the lifetime of their electrical equipment. Additionally, if an unforeseen event does happen, digital systems can support fast detection and remote restoration to help maintain uptime and avoid having to send a crew to explore the situation.

Thirdly, energy and load management solutions can be used to create an effective digital layer that is also essential to make sure power is distributed to EVs in the best way. When capacity allows, for instance, it could be more cost-effective for a particular site to charge vehicles overnight. At other times, it may need to deliver energy at a faster rate to respond to high demand or tight schedules. To make the ongoing decisions needed to orchestrate operations effectively, providers need a dynamic energy load management system (DELMS). This combines onsite controllers, resilient to communication outages, with a cloud-based decision system that interacts with third party fleet schedule systems and charge point management systems as well as weather, billing and local utility interfaces. By continuously assessing needs alongside costs, space and other relevant factors, the software allows providers to make optimal use of their infrastructure.

Pillar 3. Success Of A Fast Charging Infrastructure Relies On Flexibility

When each of these elements is implemented effectively into EV fast-charging infrastructure, the results can be impressive.

One example of this in action is Stagecoach, the UK's largest bus and coach operator, which is working with us to support the electrification of bus fleets across the country. As part of its move towards zero-emission travel, Stagecoach is using our smart eMobility solution across multiple UK sites, bringing together ultra-rapid EV charging, electrical distribution infrastructure, software, and ongoing service support.

The partnership is designed to solve one of the biggest practical challenges in fleet

electrification: how to build infrastructure that is reliable from day one, but flexible enough to grow as more routes and vehicles are electrified.

This is where installers and infrastructure partners have a critical role to play. Customers will increasingly need guidance not only on chargers, but on the wider power architecture that makes fast charging viable, from grid connections and electrical distribution to monitoring, load management and future integration with renewables or storage.

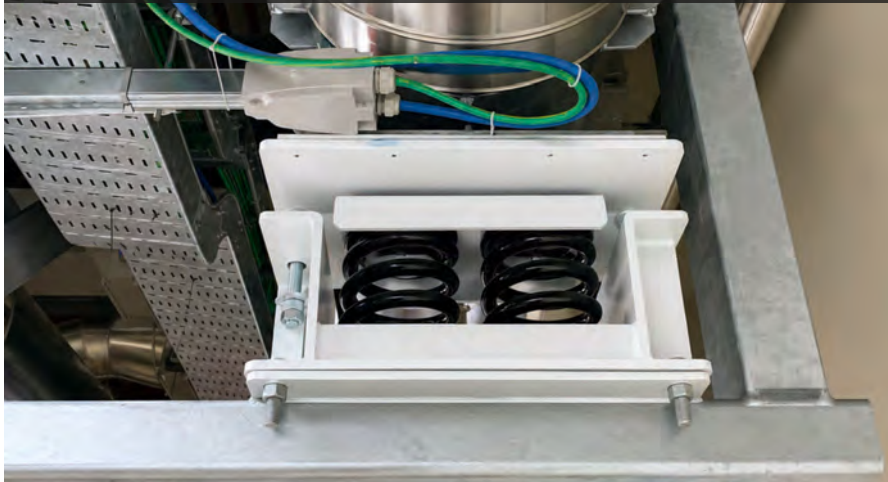
The EV transition will not be powered by chargers alone. It will depend on resilient, intelligent and flexible energy systems, designed not just for the charging demand of today, but for the scale and complexity of tomorrow. **REI**

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The Quiet Problem: Why low-frequency vibration demands high-deflection isolation

by Valeria Vezzo, CEO of Soleco Engineering



High-deflection spring isolation mounts installed on a suspended building services structure

A S building services installations grow in scale and complexity, vibration isolation is emerging as a discipline that demands greater engineering attention than it has traditionally received. The expansion of large-scale energy systems - from industrial heat pumps and cooling plant to power generation equipment - is placing new demands on the way mechanical vibration is managed within buildings and technical facilities. Understanding why requires looking beyond acoustic comfort to the underlying mechanics of vibration transmission.

Why frequency matters more than load

A common misconception in vibration isolation is that the primary selection criterion is the weight of the equipment. In practice, the critical variable is the excitation frequency — the speed at which rotating or reciprocating components generate vibration cycles. This is the parameter that determines how much static deflection an isolation system must achieve to be effective.

The lower the excitation frequency, the greater the deflection required from the isolator. CIBSE Guide B4 - the primary UK technical reference for noise and vibration control in building services - makes this explicit in its vibration isolation selection chart (Table 4.56).

The table specifies minimum static deflection requirements for a wide range of equipment types and structural configurations. Load never appears as a selection variable. Deflection does, consistently, across every application.

Large, slow-running machines - base-mounted pumps above 4 kW, high-pressure centrifugal fans above 15 kW, reciprocating compressors, industrial boilers and standby generation plant - are precisely the equipment types where CIBSE guidance specifies the highest deflection requirements, reaching 90 mm and above depending on floor span. These are also the machines that standard compact mounts are least equipped to handle.

Why standard mounts fall short

Elastomeric mounts perform reliably across a wide range of standard applications. But at low excitation frequencies and significant operating loads, they cannot achieve the deflection depth required to isolate effectively. A mount chosen outside its correct deflection range will underperform regardless of its build quality - and retrofitting vibration isolation after commissioning is rarely straightforward, and invariably more disruptive and costly than addressing it at the specification stage.

High-deflection spring isolation systems are specifically engineered to address these conditions.



Valeria Vezzo – CEO of Soleco Engineering Srl

Engineered for demanding conditions

Soleco Engineering Srl, an Italian manufacturer with over 50 years of experience in vibration isolation and seismic protection, has developed high-deflection spring isolation systems for precisely these applications. Available with static deflection from 25 to 100 mm as standard - with bespoke solutions available up to 120 mm where application requirements demand it - these systems address the low-frequency isolation requirements of large industrial plant, heavy building services machinery and critical mechanical installations across sectors including energy, data infrastructure and industrial facilities.

Height adjustment and prestressing systems allow correct load distribution even where equipment weight is unevenly distributed across support points. Where required, inertial bases combine structural mass with spring isolation to further reduce transmitted vibration. Soleco's technical team works directly with engineers, contractors and specifiers to size and select the appropriate solution for each application.

Specifying isolation at the design stage

CIBSE Guide B4 is explicit that vibration and noise measures are always more effective and economical when introduced at the design stage. Under BS 8233:2014 — the British Standard setting noise performance criteria for buildings — vibration isolation should be treated as an integral part of the acoustic design process from the outset, not a corrective measure applied after installation.

Soleco Engineering will be present at Installer Show 2026 — stand 5162 — where the team will be available to discuss isolation requirements and specification support. **REI**

Planning for energy independence requires a software upgrade

By **Matt Gray**, founder and CEO of TransitionZero.

Fiona Howarth, founder of Octopus EV and chair of TransitionZero.



THE world is spending its way into a new energy era, but planning it with software from the last one.

With the Israel-USA-Iran war, oil prices are soaring and governments are rushing to firm up alternative energy sources. Global investment in the power sector reached \$1.5 trillion in 2025, according to the International Energy Agency, and had already been forecast to rise sharply every year this decade. Electricity grids are being asked to do something they were not designed to do: integrate rapid growth in variable low-cost renewable generation, while managing a new class of bidirectional distributed devices such as electric vehicles, batteries and rooftop solar.

Every dollar of this spending will ultimately land on consumer energy bills or government balance sheets. The decisions being made now – about where to build, what to connect, and how to sequence it all – will shape energy affordability, security, and accessibility, for decades to come. Yet the software tools being used to make those decisions would not look out of place in the previous century.

The cost of that lag is delayed clean energy, higher bills, and missed climate targets.

Meeting electricity demand at the lowest cost in the 21st Century is one of the hardest analytical problems in public policy. It requires policymakers and planners to run "what if" scenarios at an unprecedented scale and speed. What if that offshore wind farm is delayed? What if rooftop solar adoption in any given region doubles? What if gas prices remain structurally low or high? What if a major industrial customer closes or arrives?

Consequences

The consequences of getting these answers wrong are enormous. Overbuilt, and consumers and taxpayers pay for infrastructure that sits dormant. Underbuilt, and risk having unreliable and inconsistent power for homes and businesses. Or, the investors and jobs move to other, more forward-thinking countries.

The policymakers and planners tasked with navigating these trade-offs are not failing for lack of effort. They are often failing for lack of tools. The evidence is stark: the IEA estimates around three terawatts of clean capacity are currently stuck in grid connection queues worldwide, awaiting approval. While a significant share consists of so-called "ghost projects" that will never be built, the scale is still staggering. Three terawatts is equivalent to more than nine thousand coal plants: a volume exceeding the entire installed coal-fired power fleet operating on earth today. Clean energy is ready to connect, but policy and planning systems are struggling to absorb it.

Part of the problem is structural. Electricity planning has historically relied on tools developed by pre-cloud-era companies, built on closed data and proprietary models. Their black-box nature makes scenario analysis slow, expensive and exclusionary. Studies take months or years to complete instead of days or weeks. Switching between tools often requires specialist and expensive expertise to implement.

This limits participation, slows alignment, and erodes public trust in decisions that are as much political as technical. In emerging markets and developing economies where the need for new electricity infrastructure is most acute, and where the energy transition will largely be won or lost, these tools and the expertise they demand are often unaffordable.

Advances

This need not be permanent. Advances in open modelling, cloud computing and AI have made it technically feasible and economically viable to build a new generation of planning tools: ones that are transparent, interoperable, and accessible to policymakers and planners in Lagos as readily as in London. These tools are improving every day. What is needed now is the institutional will to embed them in policy and planning processes, and the investment to make them genuinely fit for real-world use. Take Pakistan. Open modelling

shows that batteries are the country's antidote to volatile fossil fuel prices: investing \$500m in batteries plus renewables could save up to \$2.87bn in LNG operating costs by 2030. That is the kind of insight planners need in days, not years, and it is exactly the kind of analysis that closed, expensive tools have kept out of reach in the markets that need it most.

You can think of it like the shift to open banking. When the UK mandated in 2017 that its nine largest banks open their data to third parties via standardised APIs, the financial establishment was sceptical. What followed was a wave of fintech innovation that has since reached over 13 million users: budgeting tools, faster credit access, cheaper payments. The gains were not just technological. They came from a policy decision to treat financial data as a shared infrastructure rather than a proprietary asset. That decision lowered barriers, increased competition, and ultimately benefited consumers.

The electricity planning system needs the same shift in philosophy. Proprietary models and closed data concentrate power, limit scrutiny, and make it harder for all stakeholders to participate and align. Governments have been quick to set clean energy targets, but they have been much slower to reform the planning and permitting processes that determine whether those targets can be met. Software is obviously not the whole answer: land rights, tariff structures, and interregional co-ordination all matter too. But you cannot fix what you cannot model, and you cannot model at the speed and scale the energy transition demands using old tools designed for a slower, simpler world.

The trillion-dollar electricity buildout is coming regardless. The question is whether the decisions underpinning it will be made by the public who are paying for it. That requires treating planning infrastructure as seriously as physical infrastructure and shifting to open, accessible tools. And it requires doing so now – before another terawatt of clean capacity joins the queue. **REI**

Low carbon technology has been reframed and now is the time to upskill

Mark Krull from LCL Awards explains why now is the time for installers to upskill into the low carbon sector.

THE target of achieving net zero emissions by 2050 has, for many people in the building services industry and beyond, felt somewhat distant – a future worth moving towards, but slowly and on your own terms. But with conflict in the Middle East adding further pressure to global energy markets already disrupted by Russia's war in Ukraine, the transition to low-carbon technology has become about far more than climate targets.

Consumers have paid up to £4,800 more for their energy bills in the five years since Russia's invasion of Ukraine in 2022, according to new analysis by the Energy and Climate Intelligence Unit. At the same time, recent conflict in the Middle East and the disruption of energy

supplies through the Strait of Hormuz has, once again, sent the price of gas and oil soaring.

In response, demand for solar panels, electric vehicles and heat pumps has grown. Octopus Energy reported that heat pump orders more than doubled from February to March 2026, while solar sales and EV leases also increased by more than 80%. British Gas has also seen increased demand for heat pumps, and enquires related to solar panel installation have increased 250% since the end of February.

In April, Ed Miliband said the government would "double down, not back down" on clean energy, arguing that it is now a matter of financial, energy and national security as much as climate policy. This reframing reflects a wider shift in the market, where low-carbon technologies are being acknowledged as a protection against volatile energy prices, rather than just a tool to reduce household emissions.

The benefits of renewable energy and small-scale microgeneration are becoming increasingly tangible for homeowners, creating a clear commercial opportunity for installers.

Why act now?

As the figures from Octopus and British Gas demonstrate, more customers are asking questions about heat pumps, solar, battery storage and smart controls. These technologies are becoming a standard part of many domestic retrofit and upgrade projects, no longer just a niche add-on. Businesses that can advise, specify and install these systems competently will be in a much stronger position than those waiting for the market to settle.

Meanwhile, the introduction of the Future Homes Standard (FHS) and the Warm Homes Plan bring some stability to the market. Policies that are backed by regulation and long-term direction should give businesses confidence that, whatever the political landscape looks like, they will be more difficult to weaken or delay.

Mark Krull



Qualifications for a net zero industry

For installers and training centres looking to undertake or deliver low carbon training, the following areas sit at the heart of the low carbon sector:

Heat pumps

Heat pumps are the most immediate priority for most heating engineers looking to diversify. The Level 3 Award in the Installation and Maintenance of Air Source Heat Pump Systems (non-refrigerant circuits) is the core entry point, building on existing wet heating system experience and enabling MCS registration under the Heat Pump Standard. A separate ground source route is also available, as is a combined air and ground source qualification for those wanting full coverage.

Low temperature heating and hot water systems

Low temperature heating and hot water systems underpin much of what makes heat pump installations perform efficiently. The Level 3 Award in Low Temperature Heating and Hot

Water Systems in Dwellings is essential for engineers working on underfloor heating, low temperature radiator circuits and the system design required under MIS3005-D.

In a retrofit context, where getting heat distribution right is the difference between a system that works and one that disappoints, this qualification is as important as the heat pump qualification. It is also a valuable standalone qualification for heating engineers working on new build and fabric-first projects where low temperature systems are increasingly specified as standard.

F-Gas

Refrigerant handling is an important requirement that can catch some engineers out. Installers working on refrigeration, air conditioning, or heat pump systems containing fluorinated gases must hold an appropriate F-Gas qualification. The Regulated Qualification in Fluorinated Greenhouse Gases (Category I-IV) covers the installation, servicing, maintenance, recovery, and leak checking of such systems. In addition, separate qualifications are available covering the properties and use of flammable refrigerants (A2L, A2 and A3). These qualifications support installers to be compliant as the industry transitions to low-GWP refrigerants.

Rooftop solar

Solar PV remains one of the most in-demand low carbon technologies and the Level 3 Award in the Installation and Maintenance of Small Scale Solar Photovoltaic Systems equips electrically competent installers with the specific knowledge and assessed skills to work across domestic and small commercial projects. With rooftop solar installations continuing to accelerate, this qualification opens a substantial and growing workstream.

Battery storage

The Warm Homes Plan provides long-term confidence for the building services sector through major retrofit investment. Domestic batteries are now included alongside solar PV

and heat pumps, supported by government-backed low and zero-interest loans that reduce upfront costs for homeowners. Energy storage is essential for maximising low-carbon technologies and managing grid fluctuations. The Level 3 Award in the Design, Installation and Commissioning of Electrical Energy Storage Systems supports this growing demand.

Electric vehicle charging

EV adoption is rising as petrol and diesel prices remain volatile and upfront costs fall, with many new EVs now cheaper than petrol or diesel models. EVs also support whole-house energy systems, helping homeowners benefit from cheaper electricity. Under the FHS, all new homes in England with parking must have an EV charging point. The Level 3 Award in the Installation and Commissioning of Electric Vehicle Charging Equipment enables installers to support this growing market and deliver complete renewable energy systems.

Deliver a progressive training pathway

Taken together, these qualifications represent a clear progression pathway, from an experienced heating or electrical engineer with no low carbon accreditation to a fully certified installer capable of working across a full range of technologies.

Competence is central to the success of low carbon rollout. Poor design, weak commissioning or an unsuitable system can undermine performance and damage consumer confidence. Competent installers make these systems work properly, help customers use them well and build trust in the wider market.

Become multi-skilled

There will always be reasons to wait - uncertainty over policy, pressure on margins and the challenge of making time for training. But standing still may be the bigger risk.

The strongest opportunities will come to businesses that can think beyond single-product installs. More households want joined-up advice on heating, generation, storage and smart controls, creating value for installers who can deliver that themselves or work effectively with other trades. Rural off-gas properties and retrofit projects are likely to be particularly strong areas for growth.

'Futureproofing' does not mean abandoning what your business does well but building on strengths to meet new and evolving markets. The businesses that move now, carefully and competently, will be best placed to deliver the technologies of the future. REI

<https://lclawards.co.uk>





Installing solar panels in conservation areas and on listed buildings - the key lessons:

By James Hampton, New Makers Bureau

On one hand, the Government wants us to decarbonise the grid and is pushing for solar and on the other, the planning system is restricting solar installations in conservation areas and on listed buildings - (there are around 370,000 listed buildings and more than 11,300 conservation areas in England carry legal protections designed to preserve their character. For solar installers, this creates an opportunity — but one that requires careful navigation.

The good news; is that the planning framework has shifted significantly in recent years - heritage and sustainability are no longer seen as competing goals. But the detail matters. Get it wrong and you're looking at costly delays, refused applications, or — in the case of listed buildings — a criminal offence.

What you need to know: What's covered under permitted development rights?

Most residential solar installations in England go ahead without a planning application. Under Part 14 of the GPDO, roof-mounted solar PV on houses is permitted development provided the panels don't protrude more than 200mm beyond the roof surface and don't project above the highest part of the roof.

For properties in conservation areas, the picture changes. Conservation areas generally have an 'Article 4 Direction in place' — this effectively removes permitted development rights in order to protect the character and appearance of the area. In practice, this usually means a full planning application is required for solar panels, rather than relying on permitted development.

This is where many homeowners — and some installers — get put off. But they shouldn't be. Solar panels in conservation areas are regularly approved, particularly when they aren't visible from a public right of way. If the installation is on: a rear roof slope, a flat roof concealed behind a parapet, or a side elevation that doesn't face a street — consent is routinely granted. The key concerns of the planning authority is the impact on the character of the area as viewed from public vantage points. If the solar panels can't be seen, or can barely be seen, the case for approval is strong.

Listed buildings are different as their protections are stronger, and permitted development rights don't apply. Installation of solar panels on a listed building — or within its curtilage — requires listed building and planning consent, regardless of where the panels are positioned or how discreet they are. Grade I, Grade II* and Grade II buildings alike.

Listed buildings: a more involved process

For listed buildings, the planning position is clear — you need listed building consent, but the design considerations are much more involved. Other specialists are often required as part of the process.

Historic England has published good advice - its Advice Note 18, 'Adapting Buildings for Energy and Carbon Efficiency', in July 2024, in particular. The guidance makes clear that solar panels can be appropriately integrated into heritage buildings and it is explicitly intended to dispel myths around what is and isn't possible. Historic England have stated publicly that mitigating climate change and conserving historic buildings are compatible goals.

The Historic England guidance is sensible: panels on principal roof slopes — the main, publicly visible faces of a building — are generally discouraged. But installation on less prominent roof slopes will usually be acceptable. The possible exception to this is for Grade I and II* buildings, which are historically more significant. Also, mounting panels on outbuildings or land associated with a listed building is preferred over the main building, provided the installation isn't more visually prominent.

There are considerations beyond aesthetics, too. The additional weight of panels on historic roof structures needs assessing. Things like using fixings to avoid damaging historic fabric, and making sure that the installation is reversible are key. Cabling routes need careful thought — running conduit across a Georgian façade is unlikely to win consent!

The key message for installers: listed building consent is a process and doesn't negate the potential of solar panels. A well-considered application, supported by a heritage statement that demonstrates an understanding of the building's significance, has a strong chance of approval. Whereas, a poorly considered one — panels slapped on a prominent street-facing roof slope with no thought to context — will rightly be refused.

Bristol's Clifton LLBCO: a simplified process

Bristol City Council have recently introduced a Local Listed Building Consent Order (LLBCO) for the Clifton Conservation Area, endorsed by the Planning Committee in July 2025. As far as we're aware, this is the first of its kind for solar panels in England.

The Clifton LLBCO acts to remove the need for individual listed building consent applications for rooftop solar on Grade II and Grade II* residential properties within the conservation area, subject to conditions around visibility, positioning and design. To get it through, the council undertook a

detailed visual impact assessment across the area before introducing the order, and will review its impact annually. The implications are potentially significant. Around a quarter of Bristol's 4,000 listed buildings sit within the Clifton Conservation Area, and, if the trial proves successful, Bristol intends to roll it out to other neighbourhoods. Surely a great way to speed up the process, if other local authorities follow suit, it could substantially reduce the barriers to solar on listed buildings across the country. Worth watching closely. LLBCOs are a tool that any local planning authority can use, and in the context of net zero targets and the climate emergency, more councils may well adopt similar approaches.

What installers should be advising clients

In our experience working on planning applications for solar installations in conservation areas across the country, here's what makes the difference between a smooth process and a frustrating one.

1. Assume that a planning application will be needed — and plan accordingly. Broadly speaking, in conservation areas, the Article 4 Direction will usually mean that permitted development rights have been removed for external alterations, including solar panels. Factor the planning application into the project timeline and budget from the start. The application itself is not particularly onerous if carried out by a professional, and approval rates for well-designed solar installations that aren't visible from public rights of way are high.
2. Use the council's free duty planner service. Some local authorities offer a free duty planner service for householder enquiries. A quick, no-cost way to get an initial steer on whether a particular installation is likely to need permission, before committing to a formal pre-application or planning application. Some councils also offer a formal pre-application service — a written response from the case officer and, in conservation areas, the conservation officer. This will add cost but will 'de-risk' the project.
3. Think about design from the start. The planning process requires thoughtful design. For example: dark-framed, anti-reflective panels are viewed more favourably than older, bulkier systems. And, low-profile and in-roof systems that sit flush with the roof surface reduce visual impact considerably. Also consider positioning panels on the least publicly visible

face — even at a modest sacrifice to energy yield — this can make the difference between approval and refusal.

4. Commission a heritage statement. For listed buildings and for applications in conservation areas, a heritage statement is usually required. The heritage statement will explain the significance of the building and the area, assess the impact of the proposed installation, and demonstrate why the benefits outweigh any harms. A well-written heritage statement, prepared by someone who understands both the planning framework and the heritage context, is a key factor in securing consent.

Looking to the future

The future trajectory is encouraging, legislative changes are progressively removing barriers. Historic England's guidance is supportive and pragmatic, and sets the right ambition. Innovative approaches like Bristol's LLBCO are beginning to emerge, and the technology itself is improving — modern panels are sleeker, less reflective and more visually sympathetic than their predecessors.

But there's still work to be done: decision-making across local authorities remains inconsistent and often takes too long. Some conservation officers are progressive and pragmatic; others are cautious to the point of obstruction. An independent, joint heritage sector survey found that 87% of heritage building owners perceive listed building consent as a barrier, and 75% say it prevents energy efficiency upgrades. Perception and reality don't always align — but the perception itself is a problem. It deters people from even trying.

For renewable energy installers, the opportunity is clear: millions of homes in conservation areas and hundreds of thousands of listed buildings represent an enormous untapped market. The planning process increasingly supports installations in these settings. But it requires a slightly different approach — one that values design quality, understands heritage context, and engages constructively with the planning system.

James Hampton is founder of New Makers Bureau, a London-based RIBA Chartered architecture practice specialising in sustainable design, creative reuse and low-carbon buildings. The practice works with homeowners, developers and institutions on planning applications for properties in conservation areas and on listed buildings across the country. **REI**

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Moving beyond simple yield increases to cover technical ROI, land-use efficiency, and installation logistics

By **Jo Fleming**, Co-founder and Managing Director at Corrie Energy

As electrification accelerates and energy prices skyrocket, we increasingly need onsite generation solutions to meet the surging demands of heat pumps, BESS and EVs from domestic and industrial clients. The installer landscape has rapidly changed with an explosion of new technologies and services but the same basic challenge remains: how to best meet onsite client consumption.

The core problem of fixed solar is the misalignment of daily and seasonal peaks compared to demand. The increase in solar adoption is overwhelming wholesale markets on sunny days, causing prices to collapse as supply outstrips demand. Yet we lack solar power during the shoulder hours of the day and colder months of the year. For homeowners, the highest demand for energy occurs in the early morning and late evening, and outside summer, when fixed solar output is lowest.

Setting things in motion

Solar trackers maximise generation by continuously turning panels towards the sun, increasing daily and seasonal generation just when consumers need it most. So why have solar trackers failed in the UK??

The early promise of 'dual axis' tracker deployment in the UK was undermined by their size and complexity. With panels set five to seven meters high on a central column, these bespoke units were difficult to access and mechanically unreliable. The frequency and cost of maintenance ultimately offset the yield benefits. As subsidies diminished in the 2010s, the economics of these first-generation dual axis trackers caused demand to collapse.

In 2015, single axis tracker designs resolved their own reliability challenges by moving away from chain drive systems. This engineering breakthrough created a massive new market segment through the world's sunbelt countries. Rotating panels around a horizontal pole, these simpler trackers deliver a 20+% generation gain in lower latitudes like Spain or the Southern US. The benefits exceed the additional costs and lower the lifetime cost of energy. However, they are ineffective in northern European/US where the sun is lower in the sky.

Point me in the right direction

A British technology firm, Corrie Energy, has developed the Latitude40, a new generation of solar tracker to replace dual axis trackers. Recognizing the weakness of existing systems, £1M of innovation has delivered a patented new design focused on durability and ease of maintenance. Rather than relying on an unstable single central pole, it uses a robust tripod frame. The design reduces the loading forces on the moving components by 90%. And all of this has been successfully field tested since 2021.

As an example, Corrie's trackers look to deliver on the promised of optimised solar. By extending generation daily and seasonally, they increase energy yield by up to 30%. Importantly, they capture higher market value by producing power during peak demand periods when prices are highest. With a flatter, more consistent generation curve that better matches demand, trackers improve on-site availability, and reduce low-value exports. Together, the volume, value and availability significantly improve end-user returns whilst reducing reliance on the grid. For end-users with ever increasing electricity costs, solar tracking is the solution, lowering bills for consumers.

Ease of install

For ease of install and maintenance, they have designed the tracker with modularity at its heart. By using standardised, off-the-shelf components, the system eliminates the need for the bespoke repairs that compromised obsolete designs. The modularity ensures that, in the unlikely event of a component failure, replacement is safe, easy and swift. This approach mitigates the risks for installers and ensures that maintenance remains a predictable, manageable aspect of the business.

Rooftop

Rooftop installations can require significant expenditure on scaffolding, structural surveys, and specialized safety equipment, alongside the inherent risks of working at height. The high costs of rooftop maintenance are also increasingly being recognised by commercial users as portfolios mature.

Ground-mounted

Ground-mounted trackers offer a compelling alternative by removing these costs. Corrie's system simplifies installation by using screw





By extending generation daily and seasonally, they increase energy yield by up to 30%

piles rather than the concrete foundations. Screw piles are more cost-effective and faster to install but also have a significantly lower ecological impact—a growing priority for end users. It requires no upskilling for installation teams and bypasses the logistical and ecological difficulties of concrete works. Unlike fixed groundmount systems, the tracker’s movement prevents permanent shading and waterlogging, preserving the ecological health and usability of the land beneath.

Operating lifetime

Resilience in the face of the UK’s weather is a fundamental requirement for any mounting system. Corrie Energy’s trackers are designed for a full 25-year operating life, and are built to withstand 1-in-50 year wind conditions. The system uses dynamic control to respond to conditions using a proprietary SCADA platform.

Recent install

One of our UK sites is at Our Cow Molly dairy farm near Sheffield. Eddie Andrew’s farm has extensive electricity usage of around 350MWh/year, 60% of which occurs between 7am-7pm. The farm required a solution that could enhance productivity without sacrificing its grazing footprint. Eddie already had a 14kW rooftop array on the milking barn but in 2024, the farm became a pioneer in UK agrisolar by installing 11kW of Corrie’s Latitude40 trackers.

The data from Our Cow Molly has proven the viability of the shift to solar tracking. Typically, the trackers deliver up to 30% more energy than fixed panels. In late April 2025, the Latitude40 trackers generated 47% more energy per panel than the adjacent rooftop array. The increased generation per panel decreased the payback time by a year, dramatically reducing Eddie’s energy costs. While the tracker significantly boosts yield in the spring, its winter performance offers a distinctive advantage. By angling toward the low sun, Corrie Energy’s trackers actively shed snow that would otherwise bury fixed arrays, limiting downtime.

By integrating real-time weather data, the SCADA system automatically moves trackers into a "stow position" to prevent storm damage. This system also provides installers and homeowners with comprehensive performance data. From a service perspective, the ability to monitor performance and yield means that technicians can diagnose issues before they lead to significant downtime. Should a repair be necessary, the ground-level accessibility of the unit allows a single engineer to perform the task quickly, at a fraction of the cost of a rooftop service.

Re-energising customers

The second energy shock in 5 years presents a unique opportunity to re-energise consumers in rural areas on limited gas and electricity grids.

There are approximately 4.4 million homes in the UK off the gas grid, many of which are unsuitable for rooftop solar. Listed buildings, properties with unsuitable roof orientations or asbestos are common problems – yet such buildings often have sufficient ground space for trackers.

Grid constraints can also be a huge hurdle for projects; DNOs frequently limit new solar connections. End users can maximise their energy production within existing grid constraints with tracking, as it generates higher yields from the same panels. This opens a substantial market of approximately 1.5 million homes that were previously unreachable, enabling installers to offer a premium product to a highly motivated customer base.

Corrie Energy’s next-generation tracking marks a pivotal shift for the UK solar industry: it is a product engineered for the technical and economic realities of 2026. By generating up to 30% more energy, solar tracking dramatically reduces rising bills for end-users. By eliminating the flaws of early designs, it offers installers reduced complexity, lower maintenance costs, and the versatility to serve challenging sites. As electrification accelerates, our technology bridges the gap between current supply and rising demand, a resilient, high-quality solution for a sustainable energy future. REI

To find out more, please contact info@corrieenergy.com

Women In Renewables



Verity Farrell

Renewable Energy Installer magazine focuses on Women in Renewables - in this issue, we take a closer look into the journey of **Verity Farrell** - Head of O&M, Ineco Energy Ltd.

How did you get into the renewables industry?

I did not come into the sector through a traditional technical route. I left university in my early twenties and moved back to Somerset, where I grew up, unsure of what I wanted to do next. A family friend mentioned that the Solar PV asset management company he worked for was hiring in what was then a relatively new industry. They needed administrative support and help managing a growing customer base, so I joined the business. What began as a small opportunity ultimately became the foundation of my career.

What was your first job?

My first role was as Office Manager at Green Nation, a solar PV asset management company. The business built and managed solar farms and also had a portfolio of commercial and residential power purchase agreement (PPA) sites.

Although I was initially brought in to manage administration and support the wider business, I quickly became heavily involved in client management and the day-to-day running of the portfolio. I developed a real interest in how solar PV systems were managed over the long term, particularly around performance, maintenance, and customer relationships.

The company recognised that I wanted to be involved in more than just administration, and over time I progressed into asset management for both residential and commercial projects. That was really the point where my career direction changed. I became increasingly interested in the technical and operational side of the industry, learning how



systems performed, how faults were identified and resolved, and how important strong client communication was to successful long-term management.

Green Nation was an excellent place to start because it gave me exposure to every area of the business. In a smaller company, you are often involved in far more than your original job description, and that gave me the opportunity to learn very quickly.

What does your current role involve?

I am currently Head of Operations & Maintenance at Ineco Energy, where I oversee the ongoing health, performance, and compliance of our solar PV installations.

The role combines technical oversight, client management, operational development, and strategic planning. As the company and portfolio continue to grow, a key focus of my role has been supporting the continued expansion of the O&M department and helping shape its long-term development.

Alongside the day-to-day operational management of existing sites, we are also focused on growing the department's external client offering and expanding our O&M services to support a wider range of commercial clients. A large part of that is helping clients better understand the importance of maintenance, compliance, safety, and long-term system performance.

The role is incredibly varied, which is one of the things I enjoy most about it. On any given day I could be reviewing performance data, managing contractors, resolving faults, supporting clients, quality assuring new projects or undertaking health checks on a 10-year-old system that we've won as new business.

Ultimately, the role is about ensuring that the assets we manage generate as much clean energy as possible, as safely and reliably as possible, while maintaining strong relationships with clients and supporting the continued growth of the department.

What do you see as the challenges facing the industry?

One of the biggest challenges facing the UK renewables sector is the growing skills gap. The industry is expanding rapidly, but the pipeline of skilled people is not keeping pace with demand.

We need more engineers, more O&M specialists, more project managers, and more people entering the industry generally. However, I also think the sector needs to broaden its view of what good



candidates look like. Some of the best people I have worked with have come from completely non-traditional backgrounds

Technical ability is obviously important, but so are communication skills, commercial awareness, adaptability, and a willingness to learn. The industry needs people who can manage clients, solve problems, coordinate multiple stakeholders, and help businesses operate efficiently as they scale.

There is also still a lack of clear technical training pathways within parts of the industry. For those interested in moving into renewables, but there are not always enough structured training opportunities or technical development programmes available to support that transition. If we are serious about delivering the UK's energy transition, we need to invest far more heavily in accessible training and structured development programmes.

Did you have any mentor's or anyone in particular who inspired you? (Either in or out of the industry)

One of the biggest influences on my career was Ian Dunstone, who I worked with after leaving Green Nation.

I joined his installation company as Business Manager, working across both residential and commercial solar projects. Ian recognised my potential very early on and really encouraged me to develop my operational and technical understanding of solar PV systems.

What stood out most was that he never treated technical knowledge as something that was out of reach for me because of my background. He genuinely believed that if he could understand something technical, then so could I, and that mindset was incredibly important for my confidence and development.

He took the time to explain how systems worked, how projects were delivered, and how operational management impacted long-

term performance. That support gave me the confidence to move into more senior operational roles and ultimately helped shape the career I have today.

What would you say to other women who are considering coming into the renewables sector?

I would absolutely encourage anyone considering the sector to go for it. Renewables is an exciting industry with opportunities across technical, operational, commercial, and client-facing roles, and there is no single route into it.

You do not need to have a conventional background or follow a traditional path to build a successful career in the sector. Curiosity, resilience, adaptability, and a willingness to learn are just as important.

The industry needs more diversity in every sense, not only because it is the right thing to do, but because diverse perspectives genuinely improve businesses and teams. We need more women in leadership, more women in technical roles, and more visibility around the different career paths available within renewables.

What do you like to do outside of work?

Outside of work, I am a huge Nottingham Forest supporter. Football is my switch-off from work and I thoroughly enjoy following our teams many high's (and lows!) throughout the season.

I also spend a lot of my free time with my eleven-year-old daughter. One of our favourite things to do together is cooking. We enjoy trying out new and ever more complicated recipes, which has become a really fun shared hobby for us, minus the washing up!

Beyond that, I am very social and spend a lot of time with friends and family whenever I can. Balancing a busy industry with family life and downtime is really important to me. **REI**



Community wellbeing centre strengthens long-term sustainability

A wellbeing centre supporting more than 600 people each week in Merthyr Tydfil has taken a significant step to strengthen its long-term sustainability, with the introduction of a new on-site energy system designed to reduce operating costs, improve financial resilience and protect the services it provides to the local community.

OPERATED by the Gellideg Foundation Group, the Wellbeing Centre sits at the centre of a community facing long-standing social and economic challenges, providing a wide range of support services spanning youth provision, food and nutrition programmes, financial guidance and broader wellbeing initiatives. For many of the individuals and families who access the centre each week, it represents more than a place where services are delivered; it is a consistent and dependable environment, particularly during the winter

months, where people can access warmth, support and a sense of stability in the face of increasing pressure elsewhere.

The organisation itself was established with a clear purpose: To improve wellbeing and create opportunity across the local area, responding directly to the needs of the community and working to break cycles of poor health and deprivation. That ambition was reflected in the development of the new Wellbeing Centre, opened in 2022 and designed in partnership with Archtype as the first community-owned Passivhaus in Wales. The building was conceived

to operate with exceptionally low energy demand, ensuring that it could provide a high-quality, comfortable space while minimising the cost of running it. However, as energy prices continued to rise, even a building designed for efficiency could not fully insulate the organisation from the growing financial pressure associated with electricity and gas consumption.

Significant implications

As a self-funded charity, the implications of this were significant. Increasing energy costs did not simply affect overheads in isolation, but placed



deliver the project at all, limiting its ability to take control of its energy use and reduce long-term operating costs.

The impact of this investment is expected to be substantial. Annual energy costs are projected to reduce by approximately £18,000, creating a meaningful shift in the financial position of the centre. For a commercial organisation, this would represent a clear efficiency gain. For Gellideg, it has a broader implication, reducing the need to raise funds simply to cover operational expenditure, improving predictability in a previously volatile cost area, and allowing a greater proportion of resources to be directed towards the delivery and expansion of community services. At the same time, the removal of gas dependency and reduced reliance on grid electricity contribute to a more stable and sustainable operating model over the long term.

Importantly, the system has been designed to operate without altering the day-to-day experience of those who use the building. The intention is not to change how the centre functions, but to support it more effectively in the background, ensuring that it remains warm, accessible and fully operational throughout the year while the underlying cost structure becomes more manageable and predictable.

Broader benefits

Beyond its immediate operational benefits, the project also reflects a broader ambition to demonstrate what a locally owned, community-focused approach to energy can achieve. By investing in a system that generates, stores and utilises renewable energy on site, and by working with a specialist partner to make that ambition deliverable in practice, the centre is not only reducing its environmental impact but also illustrating how greater control over energy can support social outcomes, particularly in communities where cost pressures are most acutely felt. In this sense, the project represents a practical example of how the transition to net zero can be aligned with community need, rather than existing separately from it.

For the Gellideg Foundation Group, the outcome is ultimately measured not in kilowatt hours or system performance, but in the continued ability to deliver meaningful support to the people who rely on the centre.

As Helen Buhaenko, Co-Director of the Gellideg Foundation Group, explains:

“This system is not only good for the planet; it’s an investment in the future sustainability of our organisation. By reducing our energy costs, we can focus more of our resources on supporting the community.” REI

additional strain on the organisation’s ability to sustain its services, requiring more time and resource to be directed towards fundraising in order to maintain day-to-day operations. In this context, energy became more than a utility cost; it became a factor directly influencing how much support could be delivered to the community and how securely those services could be sustained over time.

In response, the Gellideg Foundation Group set out to take greater control over how energy is generated, stored and used within the building, with the aim of creating a system aligned with both its operational needs and long-term objectives. Working with business energy specialist Nuvolt, the organisation developed an integrated approach that enables the centre to generate renewable electricity on site, store energy for use when needed and reduce its reliance on traditional gas heating.

The result is an integrated energy system combining a 32.2 kWp solar PV array, a 37.3 kWh battery storage system and two air source heat pumps, enabling the centre to generate and manage a significant proportion of its own energy on site while improving long-term cost predictability.

“Projects like this aren’t just about installing technology, they’re about understanding how a building is used and what it needs to continue functioning properly. In Gellideg’s case, it was essential that the centre remained fully operational throughout, so the system had to be designed around that reality. By aligning generation, storage and heating, the result is a solution that strengthens long-term resilience without disrupting the services people depend on.” says Owen Thomas-Thorne, Contracts Manager, Nuvolt

Government funding



Crucially, the project was supported through funding from the Welsh Government’s Ynni Cymru programme, which aims to expand community-owned renewable energy across Wales. For Gellideg, this funding was not simply supportive, but essential; without it, the organisation would not have been able to



Push power Ltd sets sail to power up Suffolk Yacht Harbour

The First Solar PV Ground-Mount plus BESS System for a UK Marina

PUSH Power Ltd, a UK provider of high-performance commercial solar power solutions, is underway to design and deliver the first ground-mount solar PV and BESS system for a UK marina at Suffolk Yacht Harbour (SYH) the leading independent marina on the East Coast.

With a track record spanning over a decade, Colchester-based Push Power Ltd provides utility-grade commercial solar solutions across major distribution, manufacturing, farming and sports facilities nationwide. The company's portfolio includes bespoke solar PV roof installations at Silverstone's iconic building The Wing and, in partnership with Centrica Business Solutions, roof installations at multiple David Lloyd Leisure Clubs throughout the UK, together with ground mounts at Gressingham Foods Ltd.

In the inaugural land-use energy optimisation for a UK marina, Push Power Ltd will design and install a bespoke array of 1152 PV ground-mounted panels for SYH, with a capacity of 479,108 kW per year, the equivalent to powering approximately 133 homes. In addition, the

project will deliver the first BESS storage system for a UK marina, with a capacity of 852.48 kWh, the equivalent of powering 86 homes per day.

Harbour history

Founded in 1967 and based in Levington on the River Orwell in Suffolk, Suffolk Yacht Harbour is a major hub for cruising, racing and boat maintenance, with 550 marina berths plus additional swinging moorings. In addition to multi-faceted workshops, two chandleries and eleven marine businesses onsite, SYH has the largest hoist capacity from Bridlington in Yorkshire to the Solent.

Andy Khan, Managing Director of Push Power Ltd said, "This is a pioneering project for the UK's marina sector. Push Power will design and deliver the country's first ground-mounted solar PV and BESS system to energise a yacht harbour, resulting in optimal energy efficiency with significant cost-savings and greater operational resilience for SYH. We anticipate Push Power's solar solution for SYH will cover nearly 50% of the company's annual electricity needs, greatly

reducing their reliance on grid power."

He continued, "Adding marine facilities to our wide-ranging portfolio of commercial clients demonstrates Push Power's expertise and agility in delivering solar solutions across multiple sectors, upholding our client's energy efficiency goals, minimising their carbon footprint and significantly reducing their overall energy expenditure."

Josh Major, Managing Director at Suffolk Yacht Harbour commented, "We're very pleased to be working with Push Power on this project, which marks an important step forward for Suffolk Yacht Harbour.

"As a working harbour, we're always looking for ways to evolve responsibly - supporting the businesses and people based here while reducing our impact on the environment around us.

"This installation reflects a long-term commitment to the future of the harbour, helping us move towards more sustainable operations while remaining true to the character and heritage of the site." **REI**

Why Solar Alone Isn't Enough: How Storage Unlocks Greater Value from Solar + for UK Businesses

By Fred Hartshorn, Invinity Energy Systems

A S a solar installer, how can you help unlock even more value for your customers and get more projects moving? Across the UK, businesses are investing in onsite solar at an increasingly rapid pace. Rising electricity costs, volatile wholesale prices and decarbonisation targets have made solar PV an attractive investment for businesses seeking greater control over their energy expenses.

Yet for many sites, solar alone delivers only part of the potential value. Generation and demand rarely align, exports are often constrained or poorly valued, and peak electricity costs continue to drive bills. Businesses are focusing more on how effectively their own generation can be used.

This is where adding energy storage to a project can supercharge a project business case. High throughput storage technologies like vanadium flow batteries are beginning to reshape how UK installers design solar systems for commercial and industrial clients.

Whilst UK tariff structures vary by supplier and site, many businesses face a familiar pattern: electricity is cheap overnight, rises through the morning, dips at mid-day and then peaks again during late afternoon and early evening hours. For larger users, demand charges or capacity based fees can further penalise short periods of high consumption.

Solar generation, by contrast, peaks around midday which is often when grid prices are low anyway. The result is a structural mismatch: excess generation during low value periods, followed by expensive imports when solar output fades.

For installers and their customers, this creates a recurring challenge. Adding more PV capacity delivers diminishing returns, and in some cases, grid export limits can prevent further PV expansion altogether. So how can this solar be used more economically?

Energy storage fundamentally changes the role of solar in your customers' energy system.

From Generation to Dispatchable Energy

Energy storage fundamentally changes the role of solar in your customers' energy system. Rather than being a fixed, real time generation source, solar becomes a supply of low cost electricity that can be stored and dispatched when it delivers the greatest value.

At a basic level, storage allows excess midday generation to be shifted into evening consumption. But for many industrial sites—particularly those with relatively flat, 24 hour loads—the opportunity goes further. Today's high throughput energy storage systems can be charged multiple times per day, drawing from both solar generation and low cost grid electricity, and discharging into periods of high demand or high pricing.

A useful way to understand this is through a two cycle daily operating strategy, increasingly applied at industrial and large commercial sites.

Cycle one occurs overnight. When wholesale prices are low, the battery charges from the grid. That stored energy is then discharged into the morning peak, reducing imports during one of the most expensive periods of the day.

Cycle two takes place during daylight hours. The battery charges from onsite solar, capturing generation that would otherwise be exported or curtailed. That energy is then discharged during the late afternoon and evening peak, when prices rise again and solar output has dropped.

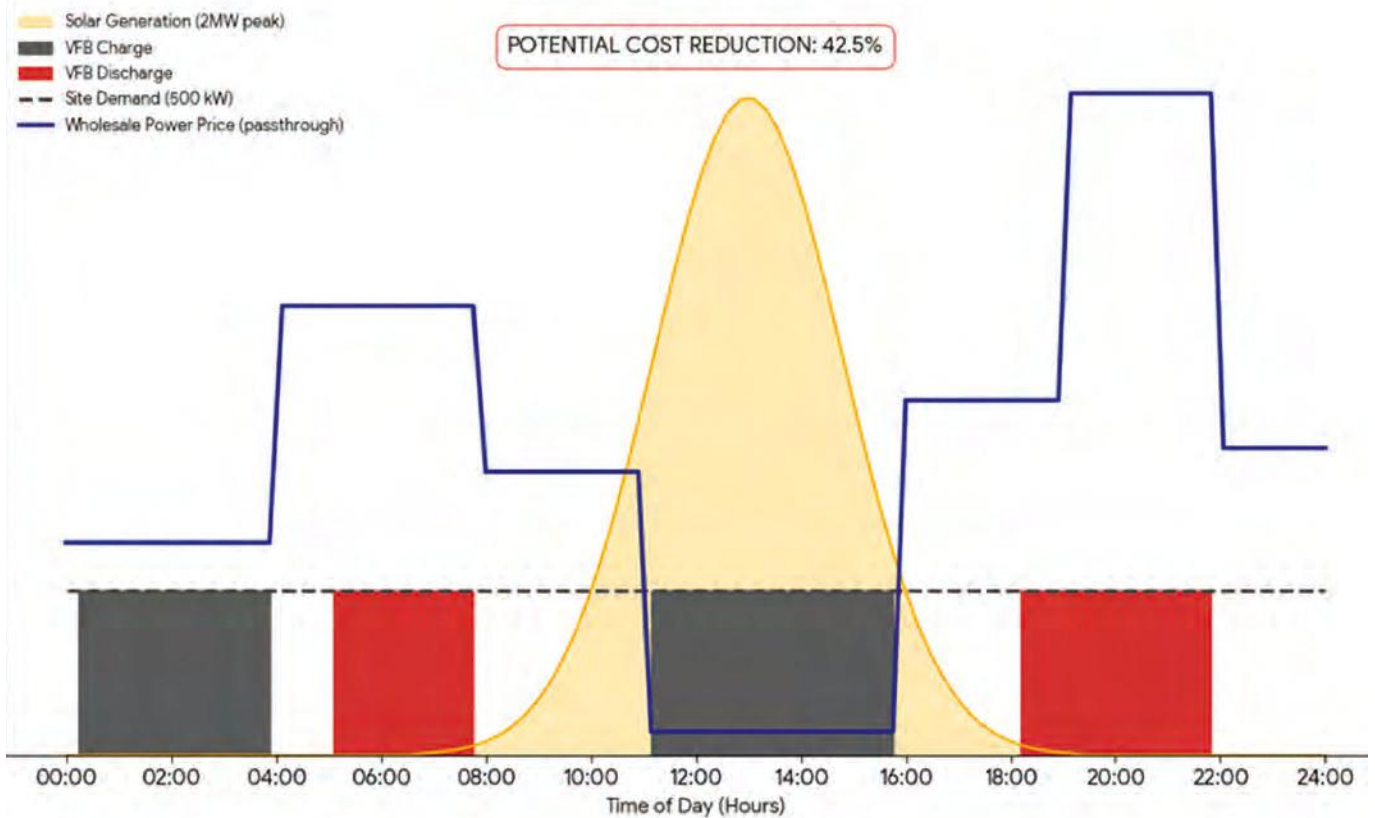
For sites with continuous demand, this approach can significantly reduce peak imports, flatten demand profiles and cut overall electricity costs. Crucially, it relies on the battery being able to charge and discharge daily over many years.

Unpacking the business case

When storage is integrated into system design from the outset, modelling shows substantial potential for cost reduction. For industrial sites with heavy load profiles and tariff exposure, pairing solar with a battery has been shown to reduce annual electricity costs by around 40 per cent in some scenarios, driven by both peak avoidance and improved solar self consumption. **REI**



VFB Business Case: Double-Cycling Strategy



In one simple demonstrative scenario based on real-world numbers, we've modelled a business with a steady 24/7 site load of 500 kW; examples could include water treatment plants, cold storage facilities, or industrial sites with continuous processes like glass or chemical manufacturing. The facility has its own solar generation, which generates 2000 kW of power during the peak of the day. They buy energy at variable rates tied directly to the wholesale prices, and so are exposed to fluctuations throughout the day, with higher prices in the morning and evening, and very inexpensive power available during the mid-day when there is a lot of renewable generation on the grid.

In this scenario, using a two-cycle strategy, the facility is able to reduce their energy costs by up to 42.5% in the summer; a significantly greater saving than from the installation of PV alone.

Additional benefits include the ability to install significantly more PV capacity per site without overwhelming local demand or export limits; in some cases this can be double or even triple what would be viable without storage. Avoided or deferred grid connection upgrades can further strengthen the overall business case.

Non financial considerations such as carbon reporting and sustainability credentials are increasingly influencing project decisions. By increasing the use of onsite renewable and reducing reliance on peak grid energy, which is often more carbon intensive, solar plus storage

systems can materially reduce reported emissions.

It's worth noting that each site is unique and results depend on site specific factors: load shape, tariff structure, solar resource and operational constraints. Robust modelling using real interval data remains essential.

Storage Technology Options

Different battery technologies are optimised for different roles. In solar paired commercial and industrial systems, key characteristics include daily cycling capability, discharge duration, operational life and safety.

Lithium ion batteries are well suited to short duration, high power applications such as frequency response and peak shaving, and for projects where space constraints or shorter operating horizons are important. Many solar plus storage installations continue to use lithium ion successfully where cycling intensity is moderate.

For applications involving large amounts of solar energy and frequent daily cycling over many years, newer technologies are gaining attention. Among these, vanadium flow batteries (VFBs) are increasingly being deployed in commercial and industrial environments. Their lack of degradation, unlimited cycling ability and flexible storage duration makes them well suited to unlocking the full potential of solar generation.

Vanadium flow batteries can support high throughput profiles, such as twice daily cycling, and operate consistently for over 30+ years. This longer

asset life often aligns with solar PV, simplifying long term system planning and financial modelling.

Safety considerations are also playing a growing role in technology choice. With aqueous electrolytes and no risk of thermal runaway, flow batteries offer a different safety profile to cell based systems. As with all storage technologies, the key is selecting the option that best matches operational requirements rather than assuming a single solution fits every application.

Implications for UK installers

As energy systems become more complex, the role of the installer continues to evolve. Delivering value now requires not just installing generation, but designing integrated systems that respond intelligently to prices, loads and operational priorities.

Understanding client demand profiles and tariff structures and selecting storage technologies accordingly are becoming critical. In this landscape, pairing solar with the right storage technology offers installers an opportunity to deliver deeper savings, greater resilience and more future proofed solutions.

Solar remains the foundation of the UK's commercial energy transition. But on its own, it rarely delivers the full economic or operational value many businesses are seeking. By making solar dispatchable, high throughput storage enables a shift from generation led thinking to system led design. **REI**

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

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ACV UK's free commissioning promotions return for 2026

Following the success of its free commissioning promotion, ACV UK, a specialist in hot water solutions, is pleased to announce the continuation of its free commissioning offers into 2026, alongside the introduction of a new enhanced loyalty scheme designed to reward customers.



ACV's commissioning promotion continues to offer customers valuable savings across the full ACV product range. Customers installing three or more ACV products within a single plant room can benefit from free commissioning on all qualifying products*. With a diverse selection of products available, customers can choose from combinations such as the Heat Master Evo, Evo S, and Smart L320 to qualify for free commissioning on all three or more ACV products*.

For more details on the 2026 Loyalty Scheme and associated benefits, contact your Local Business Development Manager. For more information on ACV products, please go to

<https://www.acv.com/gb>

Anker SOLIX Presents XE Home Battery with 5000W Bidirectional Inverter and Dual Daily Cycle

Anker SOLIX, a Plug-and-Play Home Solar Battery Storage Brand, announced the launch of Anker SOLIX XE in the UK at Solar & Storage Live London 2026. With up to 5,000W power output and a larger capacity of 7kWh, Anker SOLIX XE is an all-in-one home battery with the easiest installation and maximum throughput that helps UK households cut energy bills.



Combining an all-in-one, reliable design with powerful performance, Anker SOLIX XE offers up to 10kWp solar input, 5,000W AC output and 7,000Wh of capacity, and has complete discharge capability, enabling a 100% depth of charge. The solution is suitable for both standard and higher-consumption homes, supporting everyday household energy use such as lighting, TV and gas central heating, alongside higher-demand appliances such as electric vehicles (EVs) and heat pumps. It helps households cut energy bills by storing more solar

Subject to the UK's evolving regulatory framework and growing government support for plug-in solar and homegrown clean energy.

<https://www.ankersolix.com>

Explore Fernox's residential, commercial and renewable solutions at InstallerSHOW 2026

Fernox will be attending InstallerSHOW from the 23rd – 25th June 2026 at the NEC in Birmingham. The leading manufacturer of chemical water treatment products and filters will showcase its residential, commercial and renewable solutions. A trusted partner with over six decades of experience and in-house testing capabilities, visitors can discover and discuss the company's products, services as well as the training options available via The Fernox Experience, all of which provide professionals with a wealth of valuable support.



For the first time, installers can view the enhanced Fernox Commercial Solutions range, developed to extend the lifespan and improve the efficiency of HVAC systems. Designed to work optimally together, the range comprises air and dirt separators, vacuum degassers, side stream filters and chemicals, which are all suitable for retrofit and new build applications. On the stand will be the new CC1 Side Filter Air & Dirt 90, which provides advanced magnetic

and fine particle filtration, air removal, and chemical dosing. Rob Jacques, Commercial Manager at Fernox will also be at the stand every day to discuss the enhanced commercial solutions range with visitors.

The trusted Fernox product portfolio is extensive, and the stand at InstallerSHOW

will also highlight the best-selling TF1 Sigma Mini Installer Pack, which includes the F1 Protector and F3 Cleaner in 265ml, designed to work together to keep residential systems performing as intended.

Visitors can also learn more about the water testing options available along with the Fernox App. Engineered to save time and enhance efficiency, the app features real-time tools for water testing, treatment recommendations and gives users access to a range of technical documents.

Michael Skivington, Sales Director at Fernox in the UK and Ireland commented: "The InstallerSHOW 2026 is an ideal opportunity to talk directly to customers and we have a lot of exciting innovations to showcase. Visit Fernox at InstallerSHOW from the 23rd – 25th June on stand 5G45 at the NEC Birmingham.

www.fernox.com

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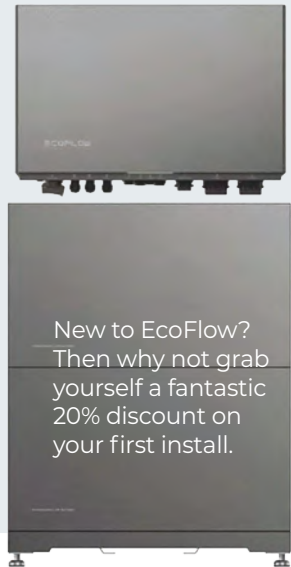


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