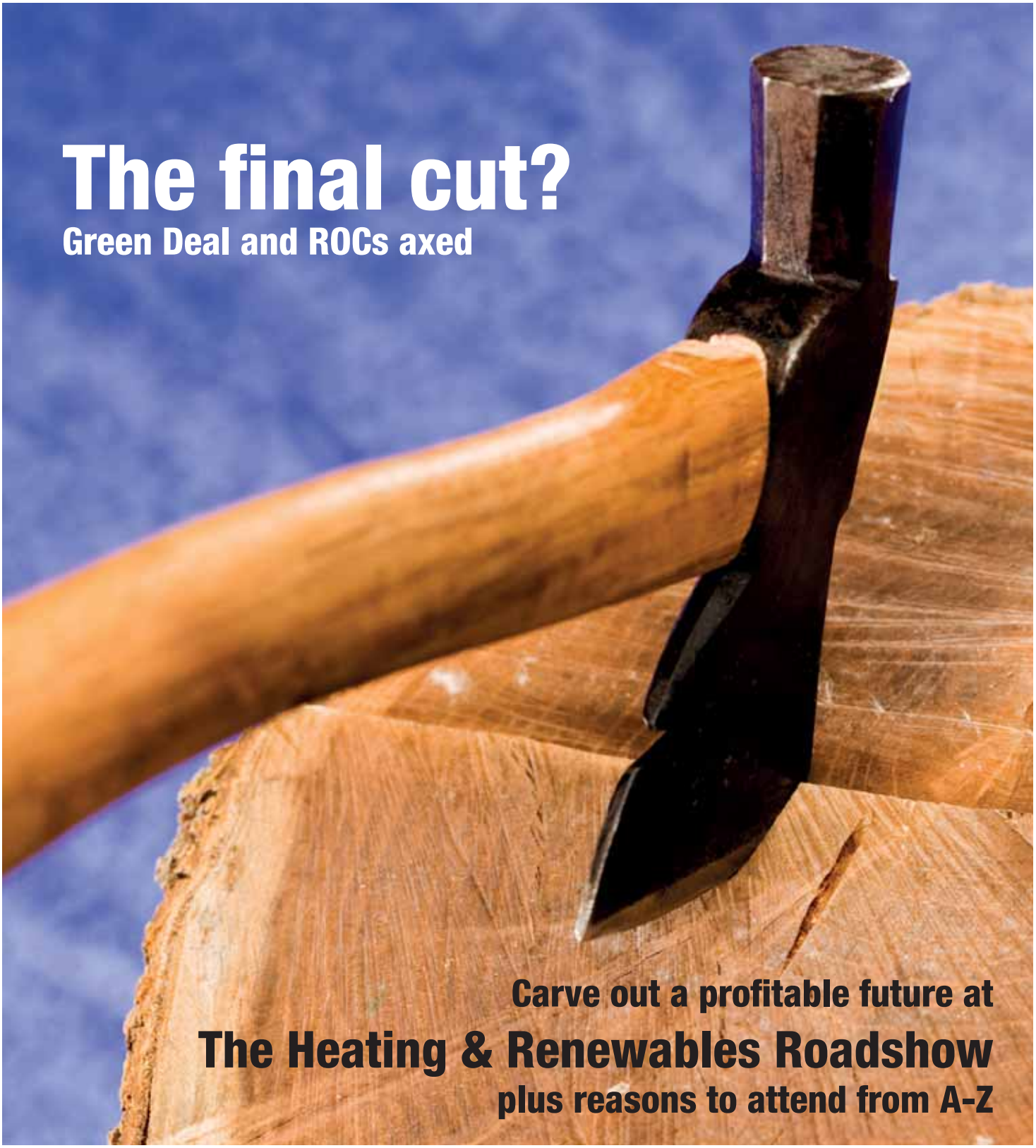
Renewable
ENERGY INSTALLER THE BUSINESS OF MICROGENERATION

SOLAR THERMAL SOLAR PV BIOMASS HEAT PUMPS WIND HYDRO September 2015



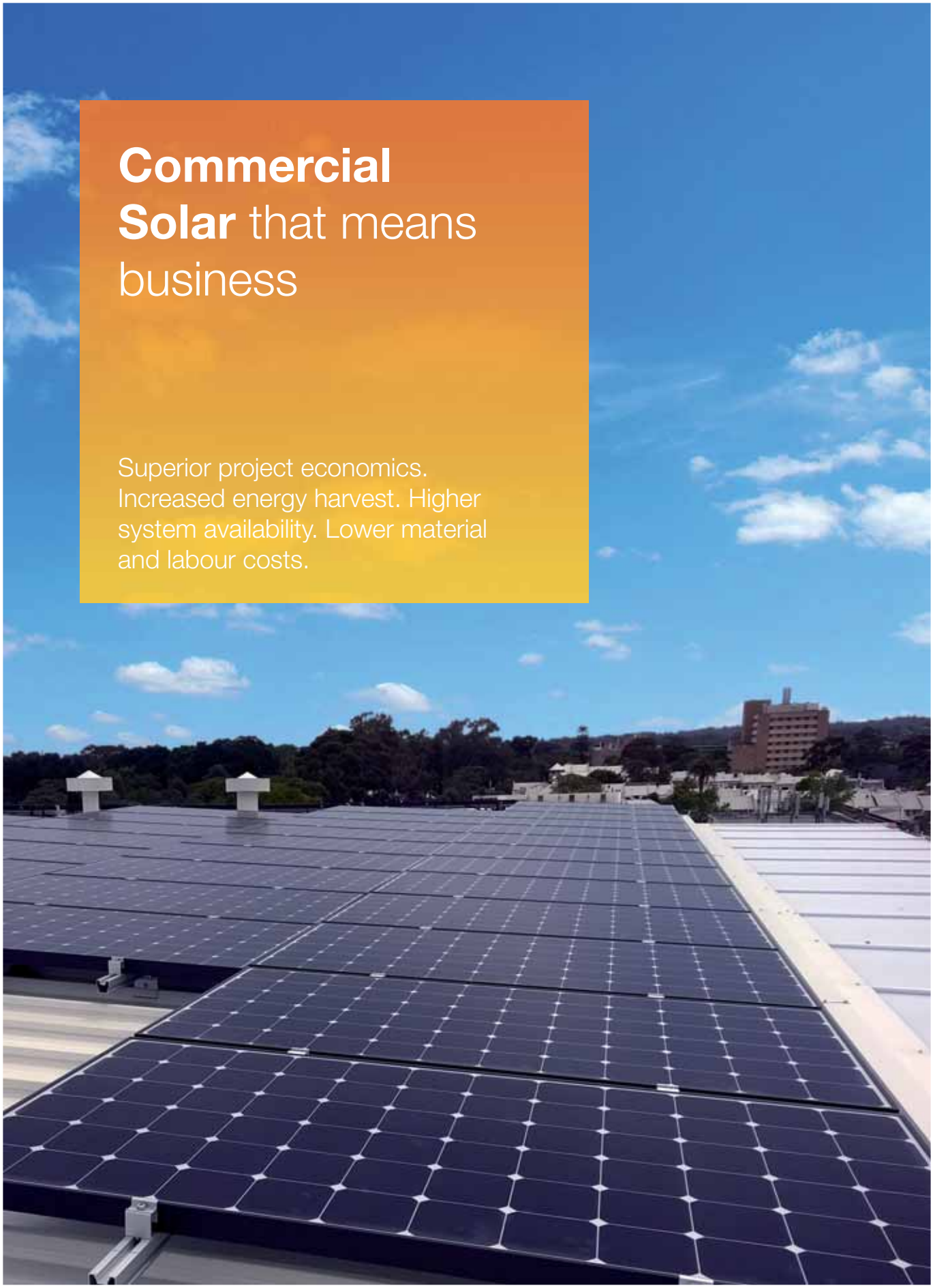
The final cut?

Green Deal and ROCs axed

Carve out a profitable future at

The Heating & Renewables Roadshow

plus reasons to attend from A-Z



Powering What's Next™

Find out more: **enphase.com/uk/commercial**

enphase ENERGY

enphase.com/uk

The (not so) Long & Winding Road

Well, 2015 will hardly be long-recalled for its summer of love following the hail of bullets fired in our direction by a government moving hurriedly about its business of balancing the books.

Except our industry is not unique in facing the consequences of deep spending cuts, and our electoral choice of a majority Tory administration made the slashing of renewable subsidies a foregone conclusion, though painful all the same.

The decision to call time on Green Deal has registered large in the mind, albeit for how long it took the powers that be to put paid to the woefully underperforming scheme, encumbered from the start by unattractive consumer finance.

Its passing will be mourned by few, but there is a clear and palpable need for a workable alternative to be found quickly, in order to protect a vulnerable supply chain before job losses become inevitable.

More controversially, solar farms and onshore wind will now be barred from further financial support under the Renewables Obligation. A thinly-veiled attempt to push deployment away from rural areas (or more cynically from Conservative heartlands), a grace period should at least help mitigate the risk of a catastrophic overnight collapse in confidence, as witnessed following the FiT announcements of 2012.

Few would dispute that ending taxpayer-funded financial incentives is a necessary evil, but announcements scheduled for the Autumn concerning the future of RHI and FiTs will determine just how quickly we are accelerated down that road.

Plotting a course through this ever-changing landscape are the expert speakers at **The Heating & Renewables Roadshow**, which tours five UK venues this month. As official media partner, I would encourage all readers to register for free at **http://heatingandrenewablesroadshow.co.uk/**. Turn to p28 for a full preview.

Contents

Editorial panel members


Andy Buchan, CEEC, Future Renewable Energy


Dave Sowden, SEA


Garry Broadbent, Lifestyle Heating


John Kellett, Mitsubishi Electric


Paul Joyner, SBS


Liz McFarlane, Zenex Solar


Tim Pollard, Plumb Center


Phyllis Boardman, Green Deal Consortia


Robert Burke, HETAS


Gideon Richards, MCS

ISSN 2049-3525

Editor: Paul Stephen
Sales director: Jonathan Hibbert
Circulation manager: Sandra Curties
General manager: Scott Masheder
Published by: Ashley & Dumville Publishing Ltd, Caledonian House, Tatton Street, Knutsford, Cheshire WA16 6AG
Advertising
Tel: 01565 626760
Email: jonathan@andpublishing.co.uk
Editorial/press releases
Tel: 01565 653283
Email:paul@andpublishing.co.uk
www.renewableenergyinstaller.co.uk

"We believe the Green Deal could have been overhauled, rather than scrapped altogether" John Newcomb, BMF p9

Events

Heating & Renewables Roadshow
10 Sep Ricoh Arena, Coventry
15 Sep Westpoint Arena, Exeter
17 Sep FIVE, Farnborough
22 Sep RHC, Edinburgh
24 Sep Event City, Manchester
http://heatingandrenewablesroadshow.co.uk/

The Renewables Event
15-16 Sep Birmingham, NEC
http://www.therenewablesevent.com/

UK Construction Week
06-11 Oct Birmingham, NEC
http://www.ukconstructionweek.com/

Solar Energy UK
13-15 Oct Birmingham NEC
http://uk.solarenergyevents.com/

The National Wood Fuel Conference
15 Oct Epsom Downs Racecourse
www.woodfuelconference.co.uk

Solar UK Conference 20GW by 2020
12 Nov BRE Headquarters, Watford
http://www.solar-uk-conference.co.uk/2015/index.php

Ecobuild 2016
08-10 Mar London, ExCel
http://ecobuild.co.uk

Specflue's Northern depot marks first anniversary

Specflue has celebrated the first birthday of its Castleford depot and 12 months trading in the North.

Since opening last August, Specflue reports a 20 percent increase in sales in the areas it distributes to from the West Yorkshire site, having previously served the entire UK from its HQ in Sudbury, Suffolk.

Managing director, Jeremy Fry, said: "We opened the outlet in the north to enable us to service customers based in the Midlands, all the way up to the Scottish border. 12 months on and Castleford has proven to be a success, with flue and wood burning stove sales increasing, verifying that we made the right decision to invest in a new depot.

Northern soul: The team at Specflue in Castleford celebrate their first birthday with a special handmade cake

"We chose Castleford as it is a pivotal point in the UK with excellent transport links. Our new depot can not only be accessed by customers, but also allows us – through our fleet of service vehicles – to fulfil our next day delivery service pledge."

Industry blasts 'senseless' subsidy cuts

Industry leaders have expressed dismay and disappointment at the government's planned withdrawal of Renewables Obligation support for solar farms under 5MW.

The move, subject to a consultation which closed on 01 September, has been labelled as a huge dent to investor confidence and a backward step in reducing carbon emissions, coming so soon after the closure of RO support for onshore wind in June.

Unlike the government's well-document pre-election pledge to halt the spread of wind turbines, the ending of support for solar farms has caught many in the PV industry out, as no such indication was given in the Conservative manifesto.

"This contrasts with repeated commitments from government to boost the commercial solar rooftop market," said The Solar Trade Association's head of external affairs, Leonie Greene.

"There is no pledge in the Conservative manifesto about cutting support for solar, so we are disappointed by this move. Solar in the nation's most popular form of energy, as the government's own opinion polls have shown."

Paul McCullagh, CEO of UrbanWind, said: "This continued withdrawal of support for renewable technologies is a complete backwards step in our transition towards a low carbon economy.

"Amber Rudd has previously stated her commitment to securing a binding decarbonisation agreement at the UN Climate Change Summit in Paris later this year. However, she has since then continued to withdraw support for onshore wind and solar, undermining an industry that is both one of our cleanest and readily-deployable options and one that enjoys widespread public support. I would like to see her show her colours by truly demonstrating her green credentials."

Juliet Davenport, Good Energy chief executive, added: "Ending support for solar power makes no sense at all. Solar power met 15 percent of UK's energy demand on the afternoon of Friday 03 July. With continued support from the government over the next five years, solar would soon be one of the cheapest forms of electricity generation."

New UK PV record set on Solar Independence Day

An increase in PV deployment and heatwave conditions saw solar power production surge to a new high on Friday 03 July, meeting 15 percent of the UK's total electricity demand

The news coincided with Solar Independence Day, when 15 locations across the UK opened their doors to showcase PV to the public.

Naturally, the peak clean generation statistic was welcomed by the sector. Ged Rowbottom, Solarlec director, said: "Increasing the UK's power output from free and clean renewable sources, rather than relying on traditional fossil fuels, has to be good for everyone.

"It's good for the environment and it's certainly good news for our customers, who are seeing their energy bills cut by up to 50 percent through installing solar panels and harvesting free power from the sun. On top of that, they are paid for every unit of electricity their system generates."

Kencot solar farm in Oxfordshire was one such location able to treat visitors on Solar Independence Day to the sight of full operation, as its 144,000 PV panels generated enough electricity for 11,000 homes under clear blue skies.

Ben Thompson, group managing director at site owner Foresight Solar Fund, said: "Solar energy consistently proves to be the most popular when scored against other renewable energy technologies in public polls, and with no noise, no smoke, no pollution nor waste and a thriving haven for wildlife, it's no wonder."

Paul Barwell, CEO of the Solar Trade Association, added: "It is great to see so many solar homeowners and businesses get involved in Solar Independence Day, showing how solar really gives power back to the people, allowing households and business to generate their own clean, green electricity. At more than 80 percent public support, solar has been shown in government opinion polls to be the country's most popular form of energy."

Chancellor U-turns on zero carbon homes

The government has abandoned long-established plans to make new homes carbon neutral by 2016

Proposed increases in energy efficiency standards for new houses will not now go ahead, in an effort by chancellor George Osborne to increase the supply of housing, via a reduction in the regulatory burden on developers.

Prior to scrapping them altogether, the plans had already been watered down by allowing housebuilders to exempt homes from the legislation in return to funding low carbon measures offsite – known as Allowable Solutions.

The U-turn has been defended by some as an understandable measure needed to stimulate growth in the construction market and keep up with demand, whilst condemned by others for consigning homeowners to higher bills and increased carbon emissions.

"This retrograde and disappointing move by the government effectively ends its zero carbon buildings policy," said Mike Landy, head of policy at The Solar Trade Association.

"The occupants of new homes will be the real losers from this, paying hundreds of pounds more for their energy."

Speaking up for the policy decision, Martyn Bridges, director of technical and marketing support at Worcester, Bosch, added: "The unfortunate reality is that it tends to cost significantly more to build a low carbon property than it does a less efficient one. With the government eager to increase the number of new homes, fewer burdens may just give the sector the boost it needs.

"This gives us a situation where housebuilders no longer have the financial burden of building to zero carbon standards and associated industries don't have the burden of legislative uncertainty."

Home truths: Plans to make new homes carbon neutral have been scrapped, as the government tries to boost stubbornly low levels of housebuilding

New REHAU Hub launches at The Building Centre

REHAU has officially launched its new REHAU Hub, at The Building Centre, London

On the tenth anniversary of the opening of its first small office on the premises, REHAU hosted a launch party for trade customers, contractors and installers to open its new 82m² exhibition space and presentation area.

The Hub is a permanent display of the company's range of energy efficiency products including district heating pipework, ground source solutions, and its extensive range of underfloor heating, chilled ceiling and thermally activated building systems.

Speaking at the event, REHAU's UK chief executive Martin Hitchin, said: "It's now estimated that around 80 percent of all building projects in the UK are influenced by an individual who is based in London, so our presence here has never been more important.

"The new REHAU Hub is designed to demonstrate not only our abilities as a manufacturer of cutting edge products, but also our strengths as a solutions provider and design consultant and, as such, it will benefit not only REHAU but all of our customers who work in the commercial sector."

Response to the new exhibition space during the launch was reportedly positive. Rick Hutchinson from Mitsubishi Electric, added: "This was my first look at some of the products which REHAU produces and sells in the UK and I was impressed by the quality and innovation on display."

The Zero Carbon Hub signs up for UK Construction Week

Zero Carbon Hub is now an event partner of Energy UK, HVAC 2015 and the Build Show, which all run between October 07-08 at the NEC in Birmingham

Zero Carbon Hub, which commissions and carries out research into building more energy efficient homes, will contribute to the seminar programme being delivered across the shows, addressing a range of topics including skills shortages in the construction industry, and the latest recommendations for ventilation.

UK Construction Week brings together nine shows including Energy UK, HVAC 2015 and the Build Show, under one roof between October 6-11. Visitors will also be able to attend Grand Designs Live, Timber Expo, the Surface and Materials Show, Kitchens & Bathrooms Live, Plant & Machinery Live and Smart Buildings 2015.

Nathan Garnett, UK Construction Week show director, said: "The Zero Carbon Hub represents the last word in knowledge, influence and cross industry insight. We are delighted to welcome the Zero Carbon Hub on board as an event partner and recognise the value its contribution to the seminar programme will deliver for our visitors."

For more information and to register visit: **www.ukconstructionweek.com**

The total renewables solution

Quality products, training & expertise all under one roof

visit us at

Heating & Renewables Roadshow 2015

National exhibitions for the Commercial, Domestic & Rural Sectors

coming to a town near you

10/9/15 Ricoh Arena, Coventry
15/9/15 Westpoint Arena, Exeter
17/9/15 FIVE, Farnborough
22/9/15 RHC, Edinburgh
24/9/15 Event City, Manchester

We are at Stand 6

Waxman Energy

Your partner in Solar PV

Specialists in the design and distribution of Solar PV systems

Tier 1 brand partners
Bespoke PV design service
24/7 online installer portal
Excellent customer service
PV training for installers

01422 374114
info@waxmanenergy.co.uk
www.waxmanenergy.co.uk

Waxman Renewables

Your partner in green energy

Specialists in the design and distribution of renewable heat technologies

Biomass
Solar Thermal
Heat Pumps
Technical Support Team
Renewable heat training for installers

01422 374114
info@waxmanrenewables.co.uk
www.waxmanrenewables.co.uk

part of the Waxman Group with over 50 years in distribution

Turquoise bids good riddance to CCL

David Casale, from merchant bank Turquoise International, gives the thumbs up to the summer budget announcement to remove renewable electricity's exemption from the Carbon Change Levy

Introduced in 2001, CCL is a tax applied to the energy used by non-domestic customers. As part of numerous policies to cut costs and lower government spending, a key declaration was the decision to remove the exemption for renewably-sourced electricity from August 01 2015.

With a transitional period agreed and full details set to be determined in partnership with the industry, David Casale, director at Turquoise, considers the announcement to be good news for the industry, despite harsh criticism from elsewhere.

"Clearly in the short term, removing a subsidy is never going to be met with open arms. However, as in wider society, we in the clean energy industry need to be weaned off of the subsidy fix," he said.

"As an energy professional of some thirty years, I noted an audible groan every time CCL was discussed; who benefitted, how was it valued and marketed, when would it end – to mention but a few questions.

"Going forwards we need consumers on our side, firm in their support for a move away from polluting fuels to low carbon ones. What's more, we must be willing to pay the necessary costs of this secure in the knowledge that there are no hidden schemes. CCL is such a scheme and I for one say good riddance."

Tough love: The industry must wean itself from all subsidy, says David Casale, Turquoise International

TEAM warns businesses over ESOS inaction

Despite the deadline for large UK businesses to carry out an ESOS assessment looming less than 100 days away, at least a quarter are yet to act, highlights **Ellen Salazar**, energy services consultancy team lead at TEAM

It's been 12 months since the introduction of the Energy Savings Opportunity Scheme (ESOS) which mandates all organisations employing more than 250 people, or with a turnover in excess of £40m, to review onsite energy usage every four years.

Qualifying businesses should be aware than the deadline for compliance is December 05, or they could face a fine of £50,000. But, according to the Department for Innovation & Skills, over a quarter of the 7,000 qualifying companies have so far failed to implement the scheme.

The audit process typically takes around two to three months to complete, and is designed to identify opportunities to become more energy efficient, and potentially utilise green energy sources.

Ellen says that the limited number of ESOS Lead Assessors could be a particular problem for many businesses seeking someone with a firm understanding of the scheme, and how ESOS affects them.

She adds that discussions have been had about extending the deadline, but DECC has now categorically stated that "the requirements for compliance are not about to change", so businesses must act now to avoid possible penalties.

Game over for Green Deal

The government has confirmed that it will halt any further funding for Green Deal amid chronically low uptake, drawing little surprise from industry leaders

Energy secretary Amber Rudd announced in July that no more cash would be released for the Green Deal Home Improvement Fund or Green Deal Finance Company, in a move to protect taxpayers and reduce government spending.

The Energy Company Obligation, which supports low income and vulnerable households to install energy efficiency measures, will continue whilst existing Green Deal Plans and Home Improvement Fund applications will remain unaffected.

The government now says it will work with industry to design future schemes which offer better value for money, and "more stringent protection and standards to consumers".

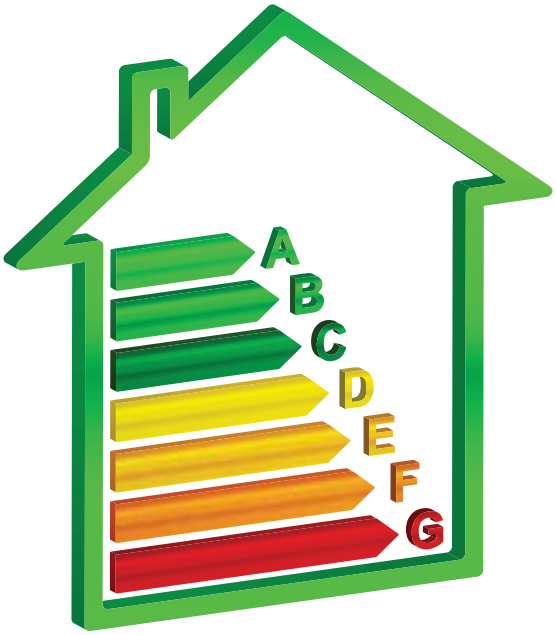
The Green Deal, which enabled homeowners to install energy efficiency measures via loans repaid through energy bills, suffered from severe undersubscription. Only 15,596 signed plans were in force at the end of June despite over half a million completed Green Deal Assessments.

Questions had been asked over its viability since the launch of Green Deal in January 2013 when the government ruled out subsidising the rate of interest applied to finance packages, subsequently undermining their appeal to homeowners who could source cheaper deals elsewhere.

Commenting on the announcement, the Builders Merchants Federation agreed that Green Deal wasn't working, but stressed that a reformed scheme was a better option for the supply chain than the government's decision to scrap it.

"The announcement has put paid to one of the coalition government's flagship policies with nothing new to replace it," said John Newcomb, BMF managing director.

"Regrettably this is another case of stop-start Whitehall policy-making that shakes business confidence and damages any industry appetite to invest in low and zero carbon solutions.



Thumbs down: Few energy efficiency measures were installed under Green Deal despite healthy numbers of assessments, sealing the fate of the ailing scheme

"The concept was sound and we believe the Green Deal could have been extensively overhauled rather than scrapped altogether."

The Heating & Hotwater Industry Council has also expressed its concern that no replacement is in sight, jeopardising the government's ambitions to cut fuel poverty and increase energy efficiency.

This is another case of stop-start Whitehall policy-making that shakes business confidence

Stewart Clements, HHIC director, said: "The policy failed to engage with both installers and consumers and delivered little in terms of energy efficiency, its demise therefore is expected and understandable.

"I am concerned that little thought appears to have been given to a replacement. Our ageing housing stock remains one of the worst in Europe, a new mechanism needs to be developed.

"We will look to engage with DECC in the coming weeks on the development of a new scheme, one that is more inclusive and engages with the whole supply chain."

Mark Bayley, chief executive of the Green Deal Finance Company, said that despite its closure to new business, he was pleased with what had been accomplished by Green Deal in a relatively short space of time.

"Our business has grown from its inception two years ago to over £60 million in plans and applications today. We have more than met our mandate of creating a national infrastructure for a Pay-As-You-Save scheme.

"Our network of small and medium size firms - the 70 Green Deal Providers - have done a fantastic job of making the Green Deal work. Our very strong growth over the past year has been driven by their efforts and investment. We've also provided over £75 million in trading lines to our small business partners over the last two years."

He added: "My priority now is to ensure an orderly closure to new business and to fund eligible plans already submitted by the Providers."

Capacity crunch is good news for renewables

The threat of power shortages this winter as the National Grid's spare generating capacity shrinks to as low as 1.2 percent should be embraced as a shot in the arm for the renewables sector, argues Green Square MD **Richard Hiblen**

Capacity is being lost year on year as older fossil fuelled power stations are decommissioned to meet legally binding carbon reduction targets. Should the worst happen and consumers experience black outs, or the more likely scenario occurs and energy intensive industries are made to endure brownouts, renewable energy installers could stand to benefit from the obvious attraction of onsite microgeneration.

Richard Hiblen, MD at Green Square, is confident that the threat to supplies will result in a sales increase in renewables from a public increasingly desperate for a long term fix.

"National Grid will be scrabbling around now trying to find short term solutions for this year, but what about next year, and the year after that? This doesn't even take into account more and more homes being built across the UK," he said.

"So what will the future hold? It's not a time for people to sit back speculating, people should be using this news as a call to action to explore alternative ways to heat and light the home.

"The intelligent choice is to make the switch to renewables and its reassuring to know that there are solutions for all homes. With so many reasons to go green, it's really a no brainer if you don't want to get left in the dark."

Energy crisis: The National Grid has warned of a dramatic fall in spare generating capacity this winter as more power stations come offline

Consumer protection legislation: How it affects you

Mark Cutler, head of operations at The Renewable Energy Consumer Code (RECC), summarises the main impacts the introduction of the Consumer Rights Act in October and other allied legislation will have for traders and customers

New legislation directly affecting traders and domestic customers is coming into force this year. Last year saw the Consumer Contracts Regulations, July this year saw the Alternative Dispute Resolution, and the Consumer Rights Act will come into force next month.

Consumer Contracts Regulations

The complex Consumer Contracts Regulations replace what were previously known as the Doorstep Selling and the Distance Selling Regulations. They replace the previous definitions of 'home selling' and 'distance selling' and:

- Dictate what information traders must provide to domestic consumers when they are signing contracts, wherever and whenever the contract is signed; and
- Provide for a longer cancellation period for consumers whose contracts are agreed 'off-premises' and 'by distance'.

Contracts which consumers sign during a sales rep's visit to their home, or elsewhere away from trade premises, are defined as 'off-premises'. In such cases traders must allow consumers to cancel the contract without penalty at any time up until 14 days after the goods have been delivered. Traders may not start to install the system during this period without the consumer's express permission.

Consumer Rights Act

The Consumer Rights Act is designed to consolidate eight separate acts into one . From 1 October consumers will have the right to new remedies for poor installations or the supply of faulty goods.

Consumers will have the right to reject goods that are not working, and receive a refund, or have the system repaired or replaced. If services are not supplied within a reasonable time, at a reasonable charge or to a reasonable standard, consumers will have the right to a repair or a price reduction.

Any verbal or written statements traders provide to consumers will be deemed to be binding contractual terms. Traders must therefore ensure that their point-of-sale material is up-to-date and accurate, and that their contracts will pass the new 'fairness' test which replaces the previous 'reasonableness' test.

Alternative Dispute Resolution (ADR)

The ADR Regulations, which came into force on 9 July, offer domestic consumers an easier, quicker and more cost-effective means of resolving complaints. They affect all UK businesses selling goods, services or digital content to consumers anywhere in the EU.

From 1 October, if traders fail to resolve disputes with consumers, they must advise consumers that there is a certified ADR body relevant to their sector, and confirm whether or not they will escalate complaints to it. Any traders required to comply with a sector-specific dispute resolution service must confirm that they will agree to use this service if consumers wish them to.

RECC is a certified ADR Provider and provides a dedicated dispute resolution service, with the option of independent arbitration as the final stage in the process. Traders in the small-scale renewable sector must therefore inform consumers that they will use the service should the need arise.

RECC Guidance

Some of these legislative changes are far from straightforward. That's why RECC has prepared guidance on each, along with model documents which installers can adapt for their own use. RECC also hosts regular training webinars. RECC members can access all these, and more, in the members' area of the RECC website.

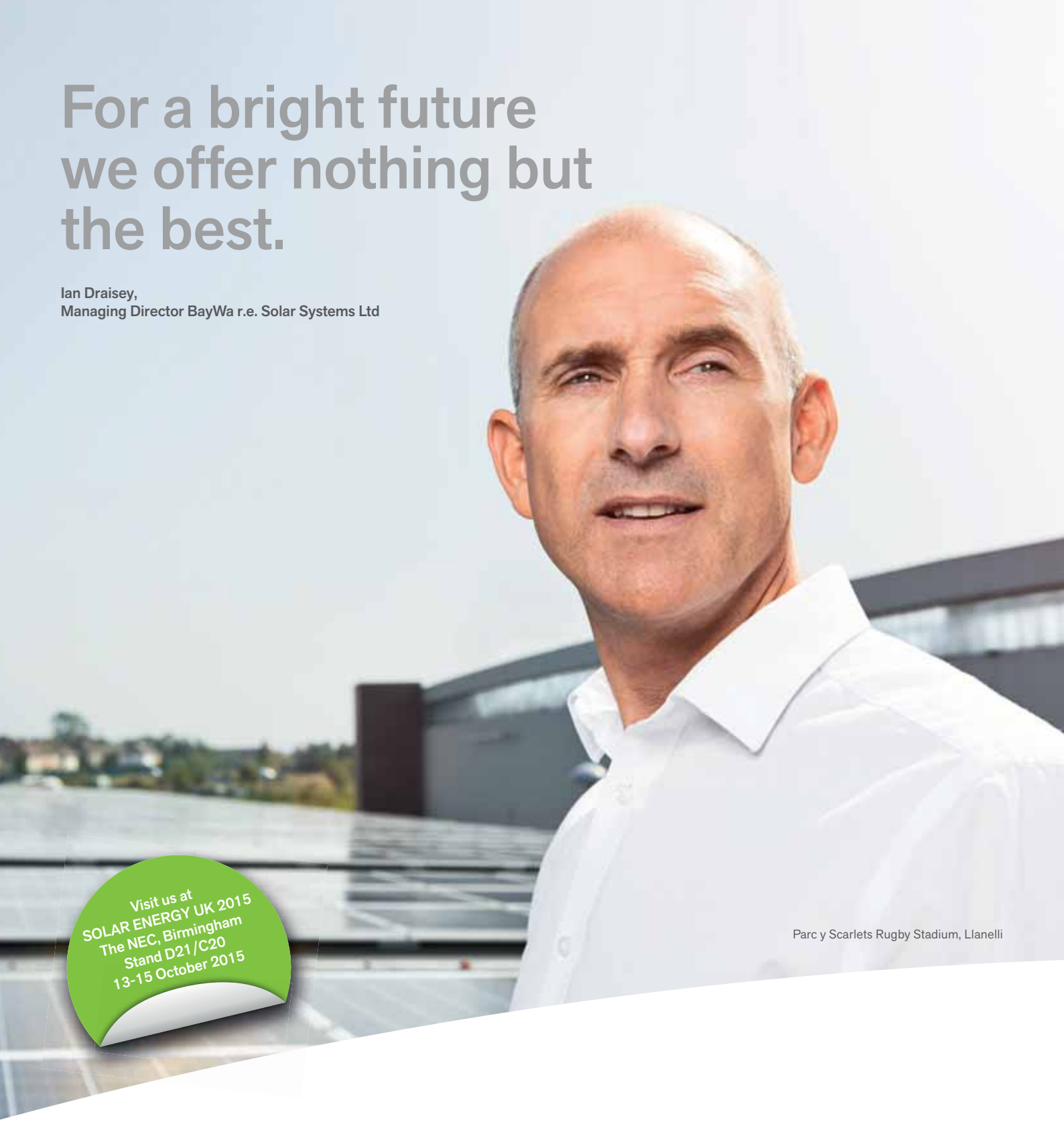
The government has also published guidance which you can access here: http://tinyurl.com/pcm57qg

Safety net: Consumers will be given new tools to tackle poor installation and faulty goods under legislation coming into force next month, reminds Mark Cutler, head of operations at RECC

The Consumer Rights Act is designed to consolidate eight separate acts into one

For a bright future we offer nothing but the best.

Ian Draisey,
Managing Director BayWa r.e. Solar Systems Ltd



Parc y Scarlets Rugby Stadium, Llanelli

You can depend upon us as a strong partner in the photovoltaic industry. We supply complete systems to PV installers across the market for domestic, commercial and public sector installations. With high quality products, excellent customer service and comprehensive technical support we provide nothing but the best, all on attractive financial terms. Visit our e-commerce site to see our full product range.

BayWa r.e. is a leading player in the European renewable energy sector focusing on solar energy, wind power, bioenergy and geothermal energy. Our business activities range from project development and implementation to retail and consulting services. We provide our customers with innovative and customised solutions, making energy sustainable and profitable. Find out more online at: **baywa-re-solarsystems.co.uk**

r.e.sponsible for your success.

BayWa r.e.
renewable energy

Raising the standard

As a reminder, from October 05 2015, in order to be eligible to claim the RHI, all RHI participants will need to source their fuel from a BSL authorised supplier.

The Biomass Suppliers List (BSL) is a register of woodfuels that have met the RHI biomass sustainability criteria. By sourcing fuels from the List, individuals seeking to claim the RHI are able to easily demonstrate that the fuel they use complies with the RHI standards.

If you are a biomass consumer, you can search for BSL authorised fuels on the Find a Fuel website.

If an RHI applicant wishes to source fuel off their own land, they are able to register as either a Self Supplier or Producer-Trader. Full definitions for supplier types are available in the guidance on the BSL website at www.biomass-suppliers-list.service.gov.uk.

Further information on applying for and claiming RHI, for both Domestic and Non-Domestic RHI participants, is available on the Ofgem website.

What do you need to know?

If you are a supplier who seeks BSL authorisation, you should make sure that you are applying under the correct supplier type. By consulting the definitions in the guidance documents, it will help you avoid delays in your authorisation. In addition, the correct type of evidence must be uploaded with each application; and these evidence requirements will differ by supplier type and/or fuel type. Further guidance on supplier types and evidence requirements can be found in the Applications and Audit Guidance document on the BSL website.

Important updates

The government has now set out new 'land criteria' sustainability requirements for the RHI, which affects fuels on the BSL. In order for your fuels to become or remain BSL authorised, it is essential that you read the Land Criteria and take the recommended steps to demonstrate your compliance. The deadline for existing BSL authorised suppliers to submit land criteria evidence was 5 July 2015. Any authorised supplier that does not complete the land criteria reauthorisation process may have its BSL authorisation revoked.

Other news

Gemserv (MCS Licensee and BSL Administrator) has recently been commissioned to undertake a research study into the solid biomass boiler market on behalf the Department of Energy and Climate Change (DECC). The research will provide insight into the biomass boiler market and document the supply chains for biomass boilers and biomass fuels. To inform this study, Gemserv are working closely with the biomass industry, so that they can better understand the structure of the biomass market, how different market players interact, the drivers for growth in the renewable heat sector, and the barriers and challenges experienced along the supply chain.

For any further information please contact the BSL Helpdesk on 0207 090 7769 and/or bslhelpdesk@gemserv.com.

Pollard's Patter

As I write this column the Plumb Center ErP Roadshow is coming to an end. It has been challenging in terms of logistics, at 40 locations across the UK working with 11 supply partners. On the other hand it has been a joy to talk to so many installers and hear of their experiences and ideas.

It is true to say that initiatives emanating from the EU are not usually greeted with wild enthusiasm, the current threat to reduced VAT rates on energy efficient products being a case in point.

However, if energy labelling inspires consumers to take further interest in their heating systems then I for one, will give out a mighty cheer. The evidence in the white goods market is pretty conclusive. Consumers have demanded the highest rating products, even if they don't necessarily understand the detail of the measurement.

If we have a similar experience in the heating market then heat pumps rating at A+ or A++ will be much easier to explain.

The energy labelling rating scale is a language well recognised by consumers. We should use this introduction as an opportunity to sell better products rather than cheaper products.

But let's be clear that we are at the start of a journey which will undoubtedly push standards higher and include more products over time.

For consumers and bona fide professionals in the heating industry, this has to be 'a good thing.'

Energy Storage Technologies in the UK

Gordon Moran, writing for the European Energy Centre (EEC), discusses the increasing importance of energy storage and its multiple applications

Energy storage technologies are an often overlooked suite of technologies which will be essential for the UK to reduce its carbon emissions. There are a variety of energy storage technologies, the most established and widely used of which is pumped hydroelectric storage. This technology is already used in the UK to balance power flows in the National Grid, with additional schemes planned to increase capacity. Even so, such schemes still provide a relatively limited amount of storage nationally.

There are an array of other energy storage technologies such as flywheel, compressed air and thermal storage energy storage systems. These technologies can serve a range of different purposes and work on a range of scales. For example, from battery storage systems for domestic PV installations to commercial scale solar power plants using molten salt as an energy store to provide 24 hour electricity.

The need for energy storage technologies to provide stability to large scale power systems in future and the range of uses they can be used for to reduce carbon emissions make it seem likely that government incentives and appropriate market framework mechanisms will be used to enhance the sector's growth potential. This in combination with the range of technologies, and the variety of uses and scales of systems they can be used for means there is great opportunity for growth in the sector, and a diverse range of new business opportunities for companies and investors.

Talking point

PV installers could be storing up problems for selling effectively in a post-subsidy marketplace, warns **Liz MacFarlane**, Zenex Solar

I'm going to sound like a broken record. In fact maybe I should just pull out one of my previous articles from the archives. It's going to be a rant.

As Amber Rudd announced details of the government's 'consultations' around changes to FiT accreditation and support for solar PV, the industry was already facing other challenges of our own making.

We are all aspiring for a mature, secure solar industry, with a backbone of quality and assured energy generation. We want PV to be recognised as a viable long-term option. Yet here I am, preparing for another pre-FiT degression boom because our industry sales teams just can't help but create a panic and cash-in on the short-lived furore.

Have a good look at your sales people, because if you don't have a contingency now, and they're using one trick to win the business, then they'll struggle to adapt to change and you will feel it.

The message should be that solar continues to be a much better option than money in the bank, that it enables someone with the right roof to take control of their energy expenditure and to join the many hundreds-of-thousands of solar homes who will benefit from quality installations for many years to come.

Your teams should be able to upsell quality products which suit a particular site, which offer long-term security and warranty support. If they're selling on price alone, or on a finance deal, then they're unlikely to be providing you with a sustainable business. I'm at the Renewables Roadshows through September and at SEUK in October, if you want to share your own experiences with me come find me on the Zenex stand.

THE PERFECT FIT

SIGN UP TO THE **GRUNDFOS ECADEMY** FOR THE CHANCE TO WIN A VIP JET TRIP*

GRUNDFOS

UPS2 25-80 & 32-80
Light commercial high efficiency replacement circulator.

MAGNA1
Light commercial high efficiency circulator with advanced functionality.

MAGNA3
Light commercial highest efficiency circulator with advanced functionality and communications.

ALPHA2 L
Proven high efficiency circulator featuring constant pressure mode, ideal for domestic underfloor and single pipe heating systems.

UPS2 15-50/60
Flexible, reliable high efficiency replacement for UPS 15-50 and 15-60 domestic circulators.

ALPHA2
New, version 'D' model of the most sophisticated and energy efficient domestic circulator on the market, ideal for premium new builds.

The latest range of reliable Grundfos circulators is now available at your local merchant, including the latest version 'D' ALPHA2. With robust start up, dry run protection and 'Summer Mode' functions, ALPHA2 D continues to be the most advanced and efficient domestic circulator on the market. For more information visit **www.grundfos.co.uk**.

***For the chance to win one of 50 available places on a series of VIP jet trips to Grundfos HQ in Denmark**, simply join the online Grundfos Ecademy at **www.grundfos.co.uk/ecademy** & complete a short module on the latest D version of ALPHA2.

be
think
innovate

GRUNDFOS

Two minutes with . . .

Who are you?
Oliver Thyne, director of Green Square Kelso

What do you do?
I oversee the day to day running of my business. We design, supply, install and maintain energy systems (predominantly renewable technologies) for the domestic and small scale markets.

Where are you?
I officially opened the doors to Green Square Kelso in The Borders in March this year, giving the people of Scotland a place to come and learn about renewable energy and the benefits of going green.

How's business at the moment?
Business is great. It's ever changing with new and better technologies finding their way into the market place.

How could business be better?
I think there is a threat to renewables as certain subsidies are falling, but I would hope that whilst the government may be bringing schemes to an end for the larger projects, microgeneration, where everyone can benefit, will continue strongly.

Who do you admire in renewables?
I am a huge advocate of microgeneration. Not only has it helped build an industry and created jobs, but it has allowed people to enjoy the benefits of renewables; more choice, a little bit of financial freedom and, of course, less reliance on fossil fuels.

What's the best business advice you've ever received?
Try to remain enthusiastic and optimistic, even when you feel like shutting your eyes. Don't get caught up thinking too much about your competitors. Don't bow to pressure to reduce your prices but instead do what you do well and properly.

Q&A

Dean Boyle

EkkoSense

REI: What have you got planned for the rest of 2015?
DB: For 2015 we're focused on improving Feed-in Tariff reporting for renewables owners, having just launched Version 3 of our renewables monitoring software. It's designed to help owners make the most of their renewables investment, for example by highlighting wind turbines or solar panels that aren't performing as well as they should be. Our goal is to ensure renewable assets are operating optimally – providing owners with early visibility of potential maintenance concerns.

REI: What is top of your wish list from the new government?
I'd like to see the new government think more about the importance of renewables in relation to climate change before they start enacting policies. It needs to be more joined up – there's no point just cutting support for renewables in education or larger businesses, without considering how this has a knock-on impact for smaller industries. Educating the next generation on renewables is the only way to go to ensure longer-term environmental benefits.

REI: How is your company cutting its carbon footprint?
EkkoSense strongly supports the move towards smart monitoring - removing the need to physically visit sites. Smart monitoring uses remote diagnostics to eliminate unnecessary trips with all their associated traffic and pollution. In addition, planned maintenance ensures energy generation from renewable assets is kept continuous - reducing the need for using grid power from non renewable sources.

Dean Boyle is CEO of EkkoSense

TECH TALKING

Economic options for domestic hot water

Heat pump specialist **Bob Long** turns his attention to the economic potential of solar assisted heat pumps, also known as thermodynamic systems

Due to slow growth within the heat pump market, it is not unusual for companies to extend their services into other renewable technologies. With electrical energy being the essential resource for operating a heat pump, solar PV is probably the most obvious choice of energy mix a company can offer.

Couple the production of electrical power through solar PV with an efficient battery system and inverter, and you may be able to make a significant impact on the carbon a household can actually save, or even make the first step towards off-grid living.

Staying on the subject of low carbon, it is worth looking at a range of heat pump products for the production of domestic hot water.

A number of companies have begun producing specialised heat pump equipment, targeting the economic production of hot water. The type of equipment I am referring to takes advantage of solar energy falling on a dark panel collector, from which the heat pump processes the thermal energy. These thermodynamic systems can effectively increase operating efficiency during days of sunshine, and reduce the overall cost of DHW production.

When the sun doesn't shine, energy is still collected by the evaporator panel, although not at the same efficiency as provided on a warm sunny day.

MCS have recently provided criteria for this type of equipment to be eligible to qualify for the RHI, but the required seasonal performance factor of 2.5:1 is viewed by some in the industry as quite harsh, considering the parameters called for a water temperature of 55°C.

The seasonal performance factor for a standard heat pump to be eligible for the RHI payment is also 2.5:1, even though the COP for an air source heat pump is measured at +7°C air temperature, and +35°C output.

Many heat pumps that qualify for the RHI would not do so if they were solely dedicated to the production of DHW at continuously elevated temperatures, and indeed tested at the same parameters as a solar assisted DHW system.

The solar assisted DHW heat pump systems are however quite a good additional technology for the provision of DHW in summer periods when the main heating system isn't required, and as such can produce attractive economics at the elevated water temperatures required for DHW.

Ideally, a mix of both technologies could provide the most efficient answer, although cost would obviously be a major consideration and actual water usage in the household must be considered in this calculation.

Many sales brochures indicate attractive payback times based upon unrealistic levels of water usage, when ideally these systems are most suited to larger families, with lots of clothes washing and showering taking place at regular intervals.

Solar assisted heat pump systems dedicated to the production of DHW generally have quite small power requirements and could be an option for off-grid users, where a PV array could probably provide enough energy to run the system on a daily basis.

The power requirement of the dedicated DHW system can be as low as 600 watts of electrical energy and a solar panel and storage battery bank would be capable of powering the system without an external power source.

This could be attractive to holiday homes, caravan parks and log cabin communities where the collaborative technologies of solar PV and a solar assisted heat pump provide a balanced and efficient solution to off-grid, or near off- grid living.

The required seasonal performance factor of 2.5:1 is viewed by some in the industry as quite harsh

DAIKIN

The natural fit: all-in-one

Welcome to the new Daikin Altherma Monobloc

The new Daikin Altherma Monobloc air-to-water heat pump is a natural fit for your business. Now lighter, smaller, with less wiring and only water connections to the outdoor unit, it promises fuss-free installation – whether you're taking your first steps in renewables or already an expert.

Your customers will love it too, because it's the most compact all-in-one heat pump – perfect for homes where space is tight – yet super-efficient and constantly reliable, with a user-friendly controller and an optional back up heater for total peace of mind.

Easy to sell, fit, set-up and service, it's the heat pump you've been waiting for – all-in-one.

Find out more on www.daikin.co.uk

CURRENT AFFAIRS

Bill Wright, head of energy solutions at the ECA, explains why the ending of ROCs support for solar could be of benefit to installers, contrary to popular opinion

Pleas from the industry for stability on energy policy appear to have fallen on deaf ears. Since the Conservatives came into power we've seen a number of policies reviewed - or, in the case of the Green Deal, cancelled as the government sets out its legislative agenda for the next five years.

It's hard to tell whether these changes will help or hinder our industry. There is a certain logic in the proposed changes to solar PV installations in terms of accreditation and the use of ROCs. The existing schemes are expensive to consumers and the taxpayer, and as they have now achieved their aim of increasing PV installations, perhaps the time is right for them to be reviewed.

Going forward, the government appears to favour smaller PV installations on existing buildings over the large scale ones, which led to the growth of solar farms as farmers and landowners looked to capitalise on a more profitable way of using their land than farming crops. However, their apparent unpopularity with the public may have resulted in the government changing its preference in favour of smaller installations. This could be good news for the industry, as rooftop installations are relatively quick – and profitable – to plan and install.

Perhaps this news is a silver lining amongst all this change, but what we really want is long term stability so investments in renewable energy sources can be properly evaluated. Sadly, I think this is some way off and that there are more changes to come.

Peak practice

Steve Pester, BRE, previews the New Code of Practice for the PV Industry being published this summer

The BRE National Solar Centre (NSC) has been working with the Institute of Engineering Technology (IET) to produce the 'Code of Practice (COP) for Grid Connected Solar PV Systems'. The CoP is aimed at raising the quality of PV installations and covers all sizes of grid-connected systems, low and high voltage connections, building-integrated and ground-mounted formats.

The collaboration has involved many industry specialists, led by internationally recognised PV expert Martin Cotterell; the CoP is to be published by IET Standards – the IET's first document specifically addressing solar PV. Aside from helping to improve the quality of UK installations, the CoP provides better alignment between UK practices and international standards. This is useful for enabling design and installation teams to extend their horizons to international work.

So, some of the headline topics in the CoP containing new or changed guidance are: new design requirements, updated installation practices, guidance on operation & maintenance, battery storage, ground mountings, lightning & surge protection and fire risk mitigation.

Within these topics there is new guidance for the industry, but there are also some areas of existing guidance that have been updated in the light of experience. These include: rules on mating of DC connectors, string fuse calculations, array frame earthing, earth fault alarms, etc. The CoP tends to go into greater depth within each subject area than previous guidance, thus providing a more comprehensive best practice guide for the whole PV industry.

At the present time, we understand that MCS will adopt the CoP as its central technical resource for the PV installation standard.

There will be be daily seminars on the CoP at this year's Solar Energy UK exhibition in october and it is available to pre-order from: **www.theiet.org/solar-pv**

HETAS adds pellet stove course to training programme

The H008 training course for pellet stove installation is the latest to have been added to HETAS' comprehensive offering for its registered members

HETAS, the official body for approving heating appliances, fuels and services, also prides itself in being the leading training provider for solid fuel, wood and biomass, for all those involved in the industry chain. From installers and chimney sweeps to building control officers and local authorities, comprehensive courses have been tailor-made to suit various specialisms and help heating professionals reach certified levels of nationally identified competency.

HETAS also requires all registered installers to have a refresher training session every five years to ensure that they are abreast of the latest regulations and practices so that they can in turn maintain high standards of service for their customers.

We want to make sure our installers have brushed up on their skills and are aware of the latest technologies in the industry

Courses are held across HETAS' nationwide network of approved training centres, ranging from:

- Introduction to solid fuel
- Solid fuel regulations and standards
- Dry appliance installer
- Wet appliance installer
- Biomass appliance installer
- System chimney
- Dry pellet stove installer *new*

"We are delighted to offer the new dry pellet stove installer course to our members," said Mike Harvey, training manager at HETAS.

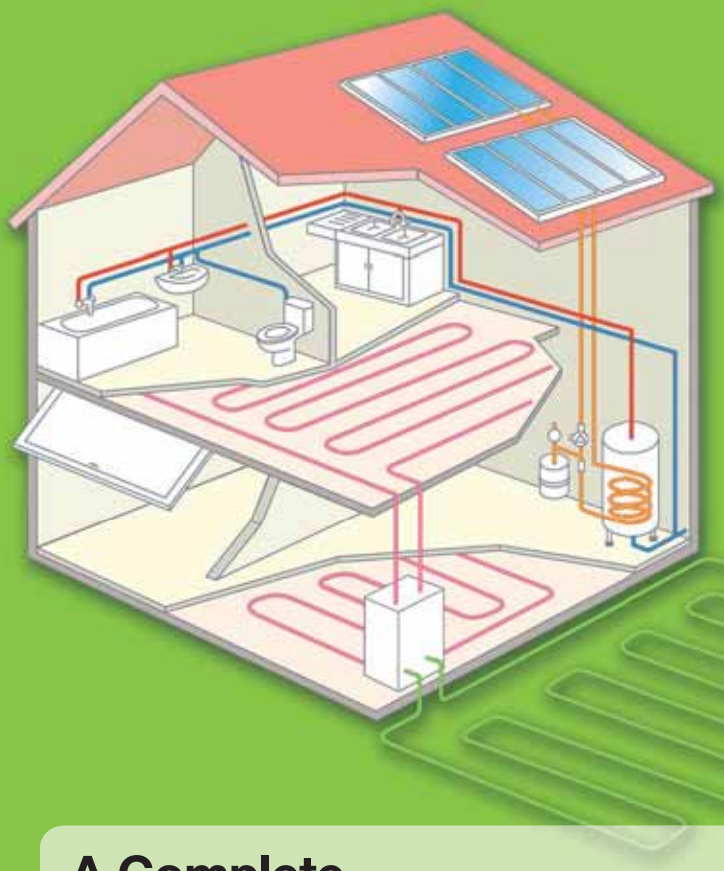
"Conscious of the 'Green' agenda, an increasing number of homeowners are opting for this more efficient and sustainable way of heating their homes and we want to make sure our installers have brushed up on their skills and are aware of the latest technologies in the industry."

The one day practical course will cover the differences between appliances, installation such as chimney requirements, commissioning, customer preference, service and maintenance. Installers must have already completed the H003 dry installer competency course before embarking on H008. For more information, please visit **www.hetas.co.uk**.

Smart choice: HETAS is delighted to start offering registered installers a pellet stove training option, says training manager Mike Harvey

High Performance Fluids for Renewable Heat Applications

Climalife are a manufacturer of technically innovative fluid solutions to help businesses install, operate and maintain energy efficient and sustainable equipment.



Domestic Hot Water & Underfloor Heating

A range of technical products, compatible with hot water and under floor heating applications.

Solar Thermal

Climalife have a range of high performance fluids able to cope with the demands of Solar Thermal Systems.

Ground & Air Source Heat Pump

A range of products capable of meeting the specific requirement of heat pump applications.

A Complete Range of Packaging

Our solutions come ready to use or as concentrate and are packaged to a size that suits your needs. From small packs to IBCs and if required, bulk tanker deliveries. **Our logistics team are here to help you.**

Contact us for your FREE Heat Transfer Fluid leaflet
- with useful tips on preparation and maintenance.

climalife®

0117 980 2520

email: climalife.uk@climalife.dehon.com

www.climalife.co.uk / www.climalife.dehon.com

Green Court, Kings Weston Lane, Avonmouth, Bristol BS11 8AZ

GSHP association MEMBER

The evolution of solar thermal

In business, it's a well known fact that the most successful learn to adapt and evolve in order to survive. There's no better example of this than solar thermal, argues **Stephen Davies**, commercial director of TGE Group

The technology is one of the first of the renewables, dating back to 1910 when it was first used to help power a steam engine through the Sahara dessert. A lot's changed since then and now it finds itself competing with a range of renewables from ground and air source heat pumps through to biomass boilers and of course solar PV.

As the renewable industry evolves in the UK, partially led by incentive schemes, developments in the technologies and user demands, solar thermal is now breaching new areas and being used not only as a source of heating water but also space.

Beating energy bills

One such example is the innovative work TGE Group has recently been involved in where solar thermal has been used as part of a flagship project to provide space heating for a game rearing business in Shropshire.

The single 194kW solar thermal hot water installation was designed to help Shropshire game farmers Steve and Sam Barker overcome concerns about the effects of heavy energy use and the subsequent rising costs was having on their successful pheasant rearing business. The proposed solar thermal installation would be the largest of its kind in the UK.

On the back of a comprehensive survey, TGE Group designed and installed a 126 panel solar thermal system to provide under floor heating, divided equally across the two game rearing sheds, with a smaller 7.6kWp solar PV system to support it.

Carbon savings

The combined, multi-technology systems reduced carbon emissions from the site by around 34 tonnes per year and the solar thermal project, which is eligible for the RHI and 100 percent first year Enhanced Capital Allowance, is set to earn more than £450,000 in savings and income over the 20 years of the RHI payment.

Numbers game: Shropshire game farmers Stephen and Sam Barker reduced annual carbon emissions by 34 tonnes and qualify for nearly £0.5m in energy savings and RHI income over the next 20 years, via their 126 panel solar thermal system

Using solar thermal to heat open spaces shows the versatility of this technology. Traditionally farmers might fit solar thermal for generating hot water for wash downs, when in reality there are a wide range of commercial heating applications that the technology can be used for.

The Barker's system is illustrative of this as it is capable of keeping the high initial heat load required inside each rearing shed constant at 35˚C, whilst suiting the electrical supply and aesthetic requirements of the site.

Permitted development

One of the reasons that the technology was chosen is because the optimum output of solar thermal matches the summer pheasant rearing season, enabling the sheds to also be used for drying and storing grain through the harvest and winter months.

The net result meant the farmers were offered a significant 20 year buffer to rising energy costs and, with a generous RHI payment for commercial solar thermal systems, reduces the payback to only six years.

As a further boost, earlier this year the government announced that the installation of solar PV or thermal panels on buildings and land may be undertaken as part of 'permitted development' with no need to apply to the Local Planning Authority for planning permission.

Although the returns from solar thermal remain in the double digits, the technology does remain under threat from other renewables including solar PV. For solar thermal to survive in the competitive world of renewables it must continue to adapt and evolve its offering to meet the increasing demands of users.

Heating & Renewables Awards 2015: Shortlists revealed

The finalists for this year's Heating & Renewables Awards have been announced. All shortlisted entrants will go head to head in 15 categories, to be decided on Thursday 10 September at The Ricoh Arena, Coventry

RESIDENTIAL RETROFIT PROJECT of the Year

Sponsored by Stroma Certification

- The Bothy (Advanced Renewable Power)
- EMH Homes – East Midlands programme (Husky Heat Pumps)
- Trent & Dove Housing – Burton-upon-Trent programme (Kensa Heat Pumps)
- Clifford Lamb Court (Vaillant)
- West Whitlawburn Housing Co-operative (Viessmann)

TRAINING INITIATIVE of the year

Sponsored by NAPIT

- Product training courses (BAXI)
- G-One Installer Scheme (Grant)
- Blended learning for domestic heat pump installers (PPL Training)
- Test Centre mobile software (Thermasolutions)

APPRENTICE of the Year

Sponsored by Grundfos

- Dan Martin (Briggs and Forrester Group & EAS Mechanical)
- Lloyd Roberts (Husky Heat Pumps)
- George Houghton (OrangeHouse Renewables)
- Fraser McInnes (McInnes Plumbing & Heating)

BIOMASS INSTALLER of the Year

Sponsored by Windhager

- A.P Chant Building Services
- AD Heating
- British Gas Heat Networks
- Dunster Biomass
- Glevum Heating
- Purple Energy

COMMUNITY HEATING PROJECT of the Year

Sponsored by REHAU

- Westward Housing Group (Anesco)
- Stockport Homes (British Gas Heat Networks)
- Hestercombe House & Gardens (Dunster Biomass Heating)
- Trent & Dove Housing upgrade (Kensa)
- Bishops Wood Environmental and Educational Centre (Rook Services)
- Tracey Farm (Treco)
- West Whitlawburn Housing Co-operative (Viessmann)

Heating & Renewables AWARDS 2015

Rewarding best practice. Celebrating success.

That's entertainment: TV comedian Jason Manford is hosting this year's Heating & Renewables Awards

STROMA CERTIFICATION

NAPIT

windhager HEAT WITH VISION

GRUNDFOS

REHAU Unlimited Polymer Solutions

HIGH EFFICIENCY BOILER INSTALLER of the Year

Sponsored by Corgi VAT Saver

- Glevum Heating
- Just Energy Solutions
- Northern Gas Heating
- TSG Building Services
- Wessex Biomass

SOLAR PV INSTALLER of the Year

Sponsored by SMA Solar UK

- Campbell & Kennedy
- Carbon Zero Renewables
- Evo Energy
- Green Moray Renewables
- Kirklees Building Services

AIR SOURCE HEAT PUMP INSTALLER of the Year

Sponsored by Plumbase Renewables

- BRB
- Glevum Heating
- Husky Heat Pumps
- RA Brown
- TSG Building Services

GROUND SOURCE HEAT PUMP INSTALLER of the Year

Sponsored by The Electrical Contractors' Association

- Geothermal International
- TGE Group
- The Renewable Design Company
- RA Brown Heating Services

OIL INSTALLER of the Year*

Sponsored by Grant

- Heating Company Cambridge
- L Flower & Sons
- N D Waters Oil, Heating & Plumbing
- Star Multifuels

***Judged by Paul Rose, technical director, OFTEC**

COMMERCIAL PROJECT of the Year

Sponsored by HETAS

- Blackburn Volkswagen dealership (BS Holdings)
- Bishop's Wood Substation and Community Centre (Dimplex)
- Sonning Mill (OrangEnergy)
- Bombardier Aerospace (SALIIS)
- Castle Ashby (Viessmann)

HEATING & RENEWABLES INNOVATION of the Year

Sponsored by Corgi Services

- EcoBlue Advance Heat (Baxi)
- Vecta Condensing Biomass Boiler (Grant)
- Easy Heat Underfloor Heating (REHAU)
- geoTHERM mini 3kW ground source heat pump (Vaillant)
- Vitomax 300 LW (Viessmann)
- BioWIN 2 (Windhager)

CONTRIBUTION TO HEATING & RENEWABLES

Sponsored by Flogas

- Martin Bleasby (Discover Energy)
- Dene Carvell (EMH Homes)
- John Holloway (TSG Building Services)

COMMERCIAL INSTALLER of the Year

Sponsored by The Sustainable Energy Association

- Carbon Zero Renewables
- Evo Energy
- Finn Geotherm
- Ground Heat Installations
- Solar Advanced Systems

HEATING & RENEWABLES INSTALLER of the year

Sponsored by City Plumbing Supplies

- The winners and highly commended entries from each installer category make up the shortlist

The judging panel

Dave Sowden, chief executive, **SEA**
Bill Wright, head of energy solutions, **ECA**
Michael Harvey, training and technical support manager, **HETAS**
Richard Hughes-Lewis, inspections manager, **NAPIT**
Paul Stephen, editor, **REI**

Reasons to be cheerful

The **Heating & Renewables Roadshow** is rolling into a town near you this month as the UK's only regional show for renewable energy professionals. In case you haven't registered already, here are another **26** incentives to sign up for your complimentary ticket at: **www.heatingandrenewablesroadshow.co.uk**

Awards: 15 awards are up for grabs at The Heating & Renewables Awards 2015 ceremony on Thursday 10 September

Beer: Relax and network over free German beer and pretzels on REHAU's knowledge theatre

Car parking is free at all five venues, courtesy of sponsors Glow-worm

Glow•worm

Discounts are being offered to show visitors by several exhibitors including 4eco, NICEIC and TPI Europe

Exhibitors: Over 60 industry leading brand names can be found on the showfloor

Five venues: The Roadshow covers all areas of the country, from Exeter to Edinburgh and Farnborough to Manchester

Grant is handing out free mugs at the Grant sponsored catering area

GRANT UK

Heating: For the first time, traditional heating technologies have been added as a focus of the Roadshow reflecting the increasing use of hybrid systems and its status as a key entry point for installers into renewables

Innovation: Over 60 exhibitors from the worlds of heating and renewables will be showcasing their latest products

Jason Manford is hosting the 2015 Heating & Renewables Awards

Knowledge partners: The seminar programme is brought to you in association with knowledge partners REHAU, Sustainable Building Solutions, Edmundson Electrical and Stroma Certification.

Locations: All venues are strategically located near to the UK's major population centres and are easily accessible from the national motorway network

Register free: www.heatingandrenewablesroadshow.co.uk

Heating & Renewables Roadshow 2015

National exhibitions for the Commercial, Domestic & Rural Sectors

Media partners: Oil Installer and Renewable Energy Installer are official media partners of the Roadshow

Networking opportunities are aplenty with all the industry's movers and shakers in attendance

Open to everyone: Registration is absolutely free

Politics: Scottish minister for business, energy and tourism Fergus Ewing will be opening the Edinburgh show

Quality advice is on offer from industry experts

Roadshow: Unlike national shows we travel to you!

Seminar programme: Over 25 informative sessions from expert speakers and product demonstrations will be run across five theatres at each show

Two weeks: We travel the UK in only 14 days from Sept 10-24

Underfloor heating: A popular bedfellow for renewable heat sources, a large number of retailers are in attendance including Ice Energy and Wavin

Versatility: The Roadshow seminar content and exhibitors demonstrate the breadth and range of applications for renewables in domestic, rural and commercial sectors

Water piping: Sometimes overlooked, REHAU will be dealing with the importance of selecting the right pipework for heat pump and underfloor heating systems, via practical demonstrations on its knowledge theatre

Xternal vehicles: Look out for Roadshow exhibitors located outside the venues

Your time is valuable, which is why the show travels to you, and the seminar programme is packed with tips to help make your business grow. A full list is available at: **www.heatingandrenewablesroadshow.co.uk/seminars1/**

Zero Carbon Homes, the ErP and heat metering are just a handful of the regulatory frameworks covered in depth by the comprehensive seminar programme

Vertical limit

Mark Routley, partner at TLT Solicitors, addresses the legal hurdles to energy efficiency upgrades in the flat rental sector

On the whole private sector flats tend to be less energy efficient than socially rented flats. Over 20 percent of people in England live in a flat, most flats being privately owned in a purpose-built, low rise block. This represents a significant proportion of housing in the UK that isn't as energy efficient as it could be. The issue is made worse as older flats tend to be less efficient too. Many still have expensive electric heating, with key energy efficiency measures, such as cavity wall insulation and double glazing, not installed.

Yet there are opportunities. For example, flats may be suitable for solar PV panels bringing down energy costs. But these energy efficiency measures aren't being taken up. So why is this and what are the barriers?

Obstacle course: The current leasehold model of many flat rentals is a significant barrier to retrofitting energy efficiency measures, argues Mark Routley of TLT Solicitors

Those who would benefit most from energy efficiency measures are unable to implement them under their leases

Lease structures

Flats in England and Wales are generally owned through a lease. This creates an 'estate in land', which gives the flat-owner (the lessee) a long lease. The freehold may be owned by either a management company, by the flat owners or by an unrelated person such as a private company. It's the lease that defines the extent of the building owned by the lessee and that retained by the building owner (the lessor).

Typically the lessor will own the structure, such as the roof, walls and floors, and is obliged to maintain and repair them. These costs will be recoverable from the lessees through a service charge.

The lessor may also supply heating and power to the flats. The lease will define the rights and the obligations of the lessee. This will usually preclude the lessee from making any structural alterations either to the flat or to the fabric of the building. The lessee is usually able to sublet the flat on a short term basis under an assured shorthold tenancy. Typically in this situation that tenant will pay the energy bills.

Split incentive

It is this divergence of interests that creates a 'split incentive'. Those who would benefit most from energy efficiency measures are unable to implement them under their leases. So, while the lessor could carry out work to change the windows, install solar PV panels and insulate the building, many would ask why would they? - especially as they wouldn't directly benefit from any significant savings. And the lessor is generally not required to carry out work to improve the building just to keep it in repair. Even then energy efficiency may well not factor in his decisions.

There are other barriers too. If the building is in a conservation area or is listed, it may not be possible to install double glazing or solar PV panels. Many lessees do not realise either that if they have a mortgage they are likely to need the consent of their lender to carry out significant alterations.

What's next?

This is an area that is long overdue for government intervention. It's vital to address the 'split incentive' and overcome the barriers it presents the lessee and lessor. There is no simple solution and the enormity of the task shouldn't be underestimated.

But it's not all negative. The sector has some very good examples of successful retrofitting buildings. However, any solution is likely to put the onus on the lessor to take the lead, with lessees seeing the benefit.

Until this area is addressed by government, lease structures and the 'split incentive' will continue to be a major barrier limiting the rollout of much needed energy efficiency and renewable energy measures.

Leveraging the renewables revolution

Amid escalating fuel poverty, record energy costs and the pressure of the imminent 2020 targets, **Jerry Hamilton**, business development director at Rexel, talks through the important role that solar PV will play in our future and the lucrative opportunities it will bring for installers

Aside from legislation, government subsidies and lessening environmental impact, perhaps the most immediate and powerful argument for consumers to become more energy-efficient is the cost saving benefit. And the appeal of this is growing.

Alarmingly, according to the most recent industry statistics, the number of families living in fuel poverty currently standards at 2.3m households - around 1.1m of which have someone in work.

Despite recent and short-lived fluctuations, the main contributory factor to this has been the perpetual rise in energy prices during the last decade, which has far outstripped incomes.

Making homes more energy efficient and inexpensive to heat has to be a priority if this trend is to be reversed.

The use of solar PV has a huge part to play in this. By installing a solar PV system on their roof, homeowners can dramatically cut their energy bill costs; the Energy Saving Trust estimates that a typical 4kWp system can generate around 3,800 kilowatt hours of electricity a year which is roughly equivalent to a typical household's electricity needs. The clever bit is to become energy savvy and use energy that is generated locally while it is being produced rather than buying your energy when it is not being produced.

Simple life: Rexel's Energeasy solar online platform makes the switch to PV much easier for consumers and installers alike, argues Rexel's business development director Jerry Hamilton

Surprisingly then, solar PV has been somewhat overlooked in the past on account of the investment involved and – most pertinently, a high level of confusion over how it works and what products to choose.

However, this is all set to change. Last October saw Rexel launch the pioneering Energeasy Solar online platform in the UK, to drive consumer confidence in solar PV and make purchasing, installing and maintaining a solar PV system easier for both installer and consumer.

The way the system works is simple. Installers selected by Rexel to join the platform benefit from local lead generation through the consumer portal and a dedicated installer portal that manages the whole installation process. Using the portal's sophisticated solar energy production simulator, installers can calculate the generation potential of a solar PV installation as well as the revenue homeowners will receive from the Feed-in Tariff. This allows them to calculate the energy generation and likely income to customers.

Better still, Rexel permits installers to offer a Rexel Guarantee that if the electricity generation falls below 90 percent of that forecast – they will reimburse the difference (valid for five years following installation). This result is a risk-free proposition – helping to make the leap to solar easier.

As the energy dilemma heightens and fuel poverty escalates, the reality is that we must take action today. Solar PV, particularly with the aid of new innovation, provides the perfect solution; providing a long-term, affordable and future proof energy for all – plus a new profit stream for the installer. For those consumers yet to make the leap, the argument for renewables has never been stronger and, in turn, the opportunity for renewable energy installers has never been bigger.

Back by popular demand

Solar Energy UK (SEUK) returns to the NEC from October 13-15, reprising its popular Installer Central Feature Area

Designed for the unsung hero of UK solar, SEUK says its Installer Central Feature Area boasts a focus on both business and technical issues crucial to installers.

Speakers corner: The Installer Central Feature Area returns to Solar Energy UK, with its tailored seminar programme

Seminar topics include upselling to new and existing customers, scaling and streamlining your business to maintain profitability, lead acquisition strategies and business diversification.

Amid the backdrop of a falling Feed-in Tariff and reducing subsidies for solar, SEUK's seminar series aims to bring together leading speakers from UK solar to discuss with installers the various techniques required to maintain business development in this new policy environment.

Other business and technical sessions include:

- How to scale up and access commercial rooftops
- The new build market and the place for solar PV
- The IET Code of Practice: What you need to know
- Energy storage; using 'wrongtime energy'
- Attaining grid connections; what the DNOs want from you
- Using load profiling to get up on your competitors.

To find out more or register to attend Solar Energy UK 2015 visit: **http://uk.solarenergyevents.com/programme**

The Good Fuel Guide

Next month the government launches the Biomass Suppliers List. Dick Stephens from Euroheat, explains what this means for households and businesses

Under the new legislation, from October 05 2015 fuel must meet sustainability criteria and a lifecycle greenhouse gas emissions target in order for the end-user to continue to receive RHI payments. It is applicable to all existing and new participants.

Commercial and domestic options

For those claiming through the commercial arm of the RHI, there are two options to ensure they meet the criteria:

- Use the Biomass Suppliers List (BSL). OFGEM will require a quarterly declaration that the fuel being used within that timeframe was sourced in accordance with the guidelines.
- If an unregistered BSL supplier is being used but you are confident that the fuel will stand up to the sustainability requirements, an annual sustainability audit can be submitted to OFGEM.

For those claiming through the domestic RHI, the only option is the BSL – unless the end user is considered 'small scale'.

Home producers

There are concessions for small-scale log users. Home producers are allowed to harvest five cubic metres from their own land per quarter, adding up to around 10 tonnes per year.

Good wood rules

For logs and woodchip, moisture must be 20 per cent or less to ensure optimum boiler performance. Logs must be split and left to dry in a well ventilated area for 18 months or more for the most efficient results.

Pellet power

Wood pellets are more stable and should be delivered in the correct state if purchased from a reliable source.

Far from viewing the BSL as more red tape, it is a move that will help the industry iron out performance issues with biomass systems that are running on poor quality fuel.

Fuel rules: From October 05 2015 all RHI claimants will need to adhere to strict new directives for sourcing biomass fuel

JA SOLAR

50kW Commercial Solution.

JA Solar 265W modules partnered with the unique Delta 50kW inverter.

DELTA

JA SOLAR

4kW Domestic Solution.

JA Solar 285W modules partnered with the NEW Fronius Primo 3.6kW inverter.

£50 rebate from Fronius

Fronius
SHIFTING THE LIMITS

Call Zenex on 0330 9000214 for special prices quoting code "REI"

Our friendly team are on hand to help, quote and take orders but you can also now order 24/7 at our on-line portal...**visit now!**

zenex solar

Call: **0330 9000 214**

Visit: **www.zenexsolar.co.uk**

Contact Zenex Solar | e: **info@zenexsolar.co.uk** | w: **www.zenexsolar.co.uk** | t: **0330 9000 214**

Power struggle

With its self-proclaimed mission to rival Tesla's Powerwall unit as the leading player in the domestic energy storage market, REI caught up with **Joe Warren**, managing director of Powervault, to find out more

Q: What is the Powervault?
The Powervault is a home energy storage system for householders with solar panels. It allows them to keep their free energy for when they need it instead of exporting it to power companies by day and buying it back at night. The system charges up when the home generates more power than it needs, and releases electricity in the evening when demand peaks. The product is a complete system in a box, including batteries, charger, inverter and control unit. It is compatible with all solar PV systems, requires no extra equipment and can be installed in an hour.

Q: At what stage is it in development?
The Powervault system was launched in September 2014 and we are selling it through partnerships with solar installers. We are currently focusing on developing the product further, cutting costs and expanding our sales and marketing channels, following our successful funding round.

Q: How is it being funded?
Powervault was founded in 2012 by Sustainable Venture Development Partners which provided initial capital. It has received more than £285,000 in grants and prizes from influential organisations including Innovate UK, The Prince's Trust, Climate Kic, Nesta and the Royal Bank of Scotland. Powervault raised £150,000 of seed funding in just eight hours in its first Crowdcube campaign in September 2014. A second campaign this year raised a further £700,000 including £200,000 from the London Co-Investment Fund and £100,000 from Future Matters.

Q: How will you take on Tesla?
Tesla has done the whole market a favour by making people aware of home energy storage and its benefits. We expect the market to grow rapidly with opportunities for a number of players, and we believe our system offers significant advantages.

As a UK based technology manufacturer, we pride ourselves on understanding our customers' needs and our system is designed for the typical British house. It is available today, we are already making sales, and we are building partnerships to help build this market. Tesla's product is not currently available in the UK.

Boxing clever: The Powervault hopes to steal a march in the UK domestic energy storage with its claims to be cheaper and easier to install

Q: What is your installation target?
We aim to have our systems in 50,000 homes by 2020, helping people cut energy costs, increase their security against power cuts and reduce carbon emissions. This will also give us the scale to be able to help stabilise the UK electricity network. It's an ambitious but credible target and very achievable in a fast growing market. Some forecasts predict there will be two million UK homes with solar panels by 2020.

Q: Why should an installer source the Powervault?
1. Improved range. It allows them to enhance their service offer with a product that is available now.
2. Cost. It has one of the lowest upfront costs in the market and we are working to reduce this further.
3. We are British. We understand the market and our system is tailored for British homes. The product is designed and assembled in Britain and we are developing new features.
4. Ease of installation. Installers tell us it is easier to install than other energy storage products, taking just an hour.
5. Universally compatible. It is compatible with all solar PV systems since it does not interface directly with any part of the existing DC/inverter system.
6. Design. Its attractive visual display appeals to consumers. All components are inside one box with minimal external wiring.
7. We look after our installers. We are already working with three reputable installers and are looking for further like-minded companies to help us grow the UK home energy storage market.

LG
Life's Good

SOLFEX
energy systems

NEW

THE TRUE "ALL IN ONE" SOLUTION

The LG Therma V is designed for energy efficiency, comfort & ease of installation. LG's inverter technology ensures the highest seasonal energy efficiency in combination with optimally designed components such as the water pump, heat exchanger and fan motor.

Ease and speed of installation is obtained through factory fitted components such as A-class circulation pump, plate heat exchanger, expansion vessel & electric back-up heater.

- True "all-in-one" monobloc
- Extensive warranty, 3 years as standard or 5 years with LG approved installer scheme
- Simple to use selection program to select the right Therma-V for your project
- Weather compensation included as standard for optimum efficiency
- Pressure control reinforces heating performance by operating in stable condition even at low ambient temperature
- Emergency back-up heating included as standard
- Quiet operation through optimised fan
- "Gold-fin" treated as standard for coastal regions & areas of high pollution
- High efficiency A-class circulation pump

Limited Time Only

ADDITIONAL SAVINGS OF OVER 20%

On all **LG THERMA V** Heat Pumps from SOLFEX energy systems.

Contact us today for your reduced price.

NEXT DAY DELIVERY*

NEXT DAY DELIVERY* • CREDIT ACCOUNTS AVAILABLE
INDEMNIFIED DESIGNS • ON-SITE SUPPORT • INSTALLER TRAINING

*Next day delivery available on orders before 3pm

Contact us now for more info - T 01772 312 847 F 01772 335 277 E heatpumpsales@solfex.co.uk W www.solfex.co.uk

The UK's leading specialist integrator and distributor of renewable energy systems focussing on Solar Thermal & Photovoltaic Power, Heat Pumps & Under Floor heating.

SOLFEX
energy systems

A bright future for commercial solar

In spite of the way ahead beckoning lower FiTs and no support from ROCs, the commercial PV sector is still set to thrive, says **Sam Waxman**, managing director of Waxman Energy

The impact of the solar PV market is almost as powerful as the sun itself. If not by way of the sheer number of MWs that have been generated, but undoubtedly by the increased opportunities it has provided for a myriad of market sectors. As we face a future with lower subsidy, solar PV is still set to lead a bright path – especially in the commercial rooftop sector.

Ironically, it's due to the many potholes that have been placed in the way that commercial PV is now growing. Over the years and more recently, the Feed-in Tariff has been impacted by popularity, with degression dramatically affecting the industry. This, combined with a major reduction in ROCs, causing a shift in emphasis from solar farms to rooftop PV, means that commercial solar is now flourishing.

By utilising the untapped potential of already existing roof space, businesses are realising that the huge reductions in overheads that come with installing a PV system are increasingly worth their while. And, with energy costs rising, commercial solar is fast emerging as a credible contender in the battle against bills, ensuring considerable savings.

Add to this Power Purchase Agreement (PPA) funding options, which are a major influence on the growth of commercial solar; the technology is more accessible to business owners. PPA is now available from Waxman Energy through finance partner Renewable Energy Investments (REI), helping organisations benefit from no initial outlay and a fixed rate for 20 years.

It's due to the many potholes that have been placed in the way that commercial PV is now growing

Commercial solar is fast emerging as a credible contender in the battle against bills

Combine this with the high quality, bankable and innovative solar PV products that help to make all this happen, and businesses have a formidable system to see them through an uncertain future of fluctuating bills. With the EU Minimum Import Price saga continuing, businesses and installers are increasingly looking for safe and reliable products, which is why Waxman Energy has developed a sound and trustworthy commercial PV product package.

With panels from Ben Q, a household name and Tier 1 PV manufacturer in its own right, installers and business owners can have peace of mind that they will be investing in a high profile, low risk brand. This, combined with the manufacturer's dedication to consistently develop industry leading solar solutions, means that the benefits for users far exceed those of lesser known competitors.

Waxman Energy wholeheartedly shares the ethos for high quality products and outstanding customer support, so working with brands that are equally conscientious and pro-active in nature are obvious contenders for a strong partnership. This is shown in the new Sungrow Power pairing, whose inverters are included within Waxman's commercial package.

The second largest inverter manufacturer in the world, Sungrow Power is quickly becoming one of the UK's most installed inverter brands. This combined with highly reliable Ben Q modules and mounting systems from industry leading manufacturers like Schletter and Renusol, can provide security and peace of mind for installers and business owners alike.

The scope for commercial solar is huge and with high quality, bankable solar solutions available from reliable distributors, backed up with access to solar PV funding, it means that more people are turning to solar as a means of affordable, environmentally friendly and financially feasible energy.

Attention shift: The decreasing attractiveness of solar farms has been a boon to the commercial rooftop sector, says Sam Waxman of Waxman Energy

Sponsored by immersun®

Commercial

Testing testing

A Cheshire farm has become the test site for a system that uses the world's first hydrogen boiler, designed and installed by Giacomini UK

The system gathers renewable energy via a 48kW solar PV array and a 20kW wind turbine, which is then converted to an AC current to meet the farm's energy demands. Excess energy is then stored in a synthetic grid of 250ah deep cycle batteries.

The hydrogen electrolyser collects rainwater and purifies it by extracting the oxygen. This creates 2.2kg of hydrogen a day that is stored in the tank, ready for use in the Giacomini burner which turns the hydrogen into thermal energy. The system not only has zero running costs but, by using a catalytic reaction to convert the hydrogen into thermal energy, is also emission free. Its only bi-product is oxygen.

Matt Lowe, managing director of Giacomini UK, said: "This really is cutting edge work that will shake the energy market. This new technology could trigger a reassessment of the role that renewable energy plays. We now have the ability to maximise the potential of renewable energy in a highly cost effective way."

The Spring Bank Farm hydrogen system has been designed, implemented and managed by Clean Power Solutions. The site is a joint exercise between Clean Power Solutions and Giacomini.

Premier league: A farm in Cheshire has become a test site for a clean energy system using the world's first hydrogen boiler, according to installer Giacomini UK

Rapid delivery

Lucy Electric has completed two projects to install switchgear for solar farms, each supplying 1,000 homes in their local areas

The 3000kVa export capacity sites were developed by Green Switch Solutions, which specialises in fully-funded commercial PV farms, roof mounted PV and biomass. Lucy Electric were given just four weeks to have all equipment installed, delivered and commissioned, in order to meet a Feed-in Tariff degression deadline.

Both solar farms had similar equipment needs, so Lucy Electric used identical client side MV switchgear. The team specified the Sabre range due to its resilience and performance characteristics.

This equipment consisted of one Sabre VCE2a 250A CB motor close 24VDC actuator, with OC&EF protection 200/100/1A CT's, directly coupled to a non-auto/non-protection Sabre VCE2a as a point of isolation for the rear-mounted, direct coupled with a three-phase, three-limb, air metering unit (11000/66000/110V - 400/200/5A CT's), providing voltage reference for G59 tripping in conjunction with the previously mentioned CB actuator.

Fast movers: Lucy Electric needed just four weeks to install switchgear at two 3,000kVa solar farms, developed by Green Switch Solutions

A spokesman for Green Switch Solutions said: "We needed a quick turnaround on these projects and Lucy Electric demonstrated exceptional customer service by working to and hitting our tight deadlines. Their skilled team of workers ensured that everything was delivered to specification, on time and budget as planned."

Site one: Walmoor Solar Farm

DC capacity:	3.68 MW
Agreed Export capacity:	3,000 kVA
Grid connection voltage:	11kV
Utility:	Western Power Distribution

Site two: Rookery Solar Farm

DC capacity:	2.71 MW
Agreed Export capacity:	3,000 kVA
Grid connection voltage:	11kV
Utility:	Scottish and Southern Energy

CARBOMAT UK

Import & Distribution - Green Energy

CARBOMAT

THINKING AHEAD!

YOUR TRUSTED PARTNER IN SOLAR PV EQUIPMENT SUPPLY

Specialist PV distributor to domestic & commercial installers.

UK WIDE!

- *Leading Products • Value, Service & Delivery*
- *Knowledge & Expertise • System Solutions*

REC TWINPEAK SERIES

PREMIUM SOLAR PANELS WITH SUPERIOR PERFORMANCE

SOLAR ENERGY UK energy+

The NEC, Birmingham, UK

13 – 15 OCTOBER 2015

Visit us @ stand: D34

New Suppliers

solis inverters

SOLARWORLD

CSUN energy for today

Key Suppliers

PLATINUM PARTNER REC

BenQ BenQ Solar

BISOL Solar company!

SMA

solaredge architects of energy

SCHLETTER

Renusol

CLICKFIT

CALL US FIRST

+44 (0) 1932 428440

info@carbomat.co.uk

www.carbomat.co.uk

CARBOMAT UK

Nicholson House,
41 Thames Street,
Weybridge,
Surrey KT13 8JG

follow us on twitter

twitter.com/CarbomatUK

SOLAR PV

What: Nottinghamshire school maximises ROI

How: Navitron Monitoring & Reactive Maintenance package

Result: 17 percent ROI

Following the installation of a 120 panel 30kWp PV system, George Spencer Academy opted for a Navitron monitoring package to turn the system into a valuable educational tool.

The Nottinghamshire school was motivated not only by maximising the panels' performance, but by displaying the system's generation data in the school reception area, as a learning tool for students.

The Academy has bought a five year Navitron Remote Monitoring and Reactive Maintenance Package, which guarantees the PV system is working at all times and identifies if it unexpectedly switches off or is underperforming.

Geoff Weightman, governor for George Spencer Academy, said: "Ensuring that we are making the most of our solar panels, both in terms of generating electricity and teaching our students about the importance of sustainability, is of the utmost importance to us.

"Financially, having invested in our new 30kWp installation, knowing whether the system was performing as planned and whether there were any faults with it seemed crucial, but is something that can only be done by utilising remote monitoring."

Special measures: Purchasing a maintenance and monitoring package from Navitron could potentially save George Spencer Academy in Nottinghamshire thousands of pounds of lost revenue in the event of a fault

Stephen Knight, commercial director at Navitron, said: "Without remote monitoring, PV systems are usually only looked at to read the generation meters once per quarter, so a system could be switched off or underperforming for three months before anyone notices. For a 30kWp system, this could mean that £1,500 in revenues and savings could be lost before the fault was found.

"Reactive maintenance rather than planned maintenance saves the customer a lot of money, and the panels are a great way of teaching young people about the benefits of solar power, so we're looking forward to helping more schools like George Spencer Academy."

HEAT PUMPS

What: Flagship housing project uses exhaust air heat pump technology

How: 8 x NIBE F470 EAHPs

Result: Lower energy bills

A South Wales housing developer has fitted eight exhaust air heat pumps from NIBE at its flagship project.

The systems were specified for the Great Farm House development on the outskirts of Cardiff. The new development's one, two and three bedroom properties have also been fitted with rainwater harvesting, electric car charging points and extensive insulation.

Now officially classified as a renewable technology, exhaust air heat pumps recover warm stale air from kitchens and bathrooms, feeding this back into a heat pump via a ducting system. Used cold air is then vented outside, before being drawn back in via a system of external air vents. Properties must be well insulated to deliver the required air changes.

Daniel Ball, director at developer LivEco, said: "Great House Farm was our first sustainable project, and to establish ourselves as leaders in the field we knew we had to keep efficiency at the heart of every decision.

"The new units keep the homes well ventilated and at a warm, comfortable temperature – and have the added benefit of keeping bills down for residents. What's more, with no outdoor units required, the EAHPs meet the aesthetic constraints that come with developing around listing buildings."

Bright idea: Housing developer LivEco will be installing another 23 exhaust air heat pumps, after a successful first phase at an eight property development near Cardiff

He added: "The feedback we've had from residents has been overwhelmingly positive, with everyone saying how warm their homes feel and how low their bills have stayed. We will follow on from this completed successful first phase with another 23 detached houses."

Knowledge: Case studies

SOLAR PV

What: Rexel installs PV on Dagenham distribution centre

How: 200kWp rooftop array

Result: Annual C02 reduction of 14.2 tonnes

Rexel has completed a comprehensive energy efficiency upgrade to its Dagenham-based distribution centre and office, delivering significant savings.

Rexel implemented a monitoring system to pinpoint where energy was being wasted. For example, identifying that vending machines were being left on overnight extrapolated across 400 branches resulted in an annual saving of £96,000 on fuel bills.

A 200kWp PV system was installed at the site, powering two electric vehicle charging points. This has enabled EVs to be added to its fleet of company cars.

Jerry Hamilton, business development director, said: "It is often difficult to really engage with employees and even decision-makers on the subject of energy saving, but the detailed analysis of how we used our energy really struck a chord.

"The PV installation was a clear physical manifestation of Rexel's global commitment to a sustainable future, and it clearly pointed the way to further improvements. I look forward to using further technologies to demonstrate to other businesses how they can dovetail together, are scalable, and can be easily replicated in their premises."

Wheels of fortune: Rexel now boasts an electric vehicle company car fleet, powered by its new 200kWp PV array

BIOMASS

What: Best Western Hotel embraces green energy

How: 3 x Windhager BioWin Excel 60kW wood pellet boilers

Result: £39k RHI payments per annum

Best Western's Derwent Manor Hotel in rural Northumberland has increased its green credentials with the installation of a Windhager biomass system.

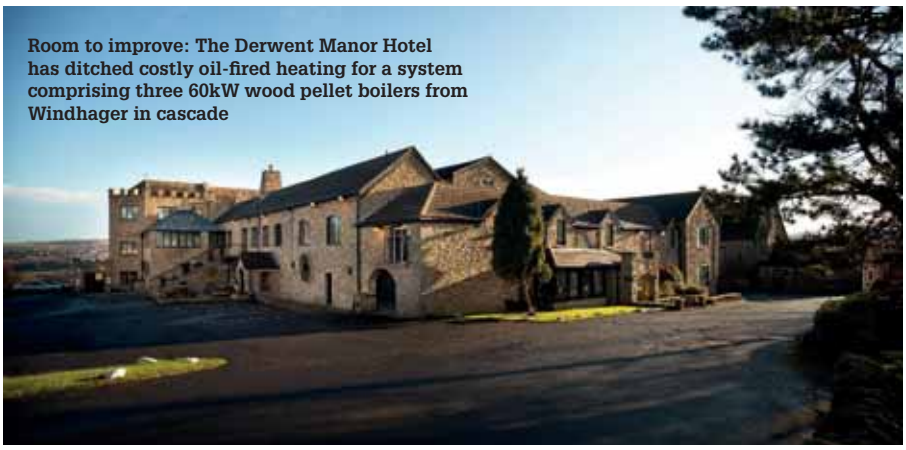
The 3 star spa and 48-bedroom hotel has six bars, six meetings rooms, and a large restaurant.

It recently decided to upgrade its oil and electricity fuelled heating system, which was costing over £29,000 per annum to run. The biomass system commissioned by GreenGuru NE is made up of two separate 180kW systems, each comprising three Windhager BioWIN Excel 60kW wood pellet boilers.

The cost of pellets is approximately 30 percent cheaper than oil, and half that of electricity, providing the hotel with considerable fuel bill savings. The system is also expected to generate RHI income of £39,000 a year for the next 20 years.

Keith Donkin, general manager of Derwent Manor Hotel, said: "As a leading luxury hotel, providing high quality facilities and service is vital whilst actively investing in ways to improve our environmental performance. This upgrade has enabled us to continue achieving these.

"The whole system has increased our boiler efficiency to 92 percent and have given us beneficial flexibility in how we can heat our whole site."



Room to improve: The Derwent Manor Hotel has ditched costly oil-fired heating for a system comprising three 60kW wood pellet boilers from Windhager in cascade

Simply clever!

Bosch string inverters: the heart of every photovoltaic system.

Bosch string inverters – now also available in the UK market! Come and visit Bosch at the Solar Energy UK Birmingham, 13 – 15 October 2015, booth no. A42

Technical excellence and innovative strength: Bosch Power Tec offers a wide range of technical solutions for the efficient use of solar energy. Our world-wide one-of-a kind inverter is the heart of your solar system, and with its intelligent design a key component of the energy revolution. The BPT-S inverter series from Bosch is simply clever. Through its touch-free gesture controlled interface, and the e.Key-technology our Inverters are commissioned easily and serviced effortlessly. Our intelligent energy solutions facilitate the distribution of generated solar energy and network the energy produced to thermal and electrical storage systems. Bosch offers technology for life: We stand for long-term solutions and forward thinking ideas. Find out more about us at **www.bosch-power-tec.com**

BOSCH

Invented for life

Figure it out

Generation tariffs for non PV technologies

Technology	Band (kW)	Tariffs (p/kWh) from 01 Oct 2015
Hydro	≤15	15.45
	>15-≤100	14.43
	>100-≤500	11.4
	>500-≤2000	8.91
	>2000-≤5000	2.43
Wind	≤1.5	13.73
	>1.5-≤15	13.73
	>15-≤100	13.73
	>100-≤500	10.85
	>500-≤1500	5.89
	>1500-≤5000	2.49

(Source: OFGEM)

Number of MCS registered installers per technology

Technology type	Cumulative number	Registered June 15
Solar PV	2482	52
Biomass	380	20
Air source heat pump	808	10
Ground source heat pump	632	04
Solar thermal	889	07
Small Wind	78	0
Total	2664	102

Number of MCS registered installations per technology

Technology type	Cumulative number	Installed June 15
Solar PV	721640	16316
Biomass	14040	1120
Air source heat pump	38226	637
Ground source heat pump	10467	148
Solar thermal	7824	82
Small Wind	4884	02
Total	797081	18305

(Figures supplied by Gemserv)

Generation tariffs for Solar PV

Tariff band	FiT rate (p/kWh) from 01 Oct 2015
<4kW	12.47
>4-10kW	11.3
>10-50kW	11.3
>50-150kW	9.63
>150-250kW	9.21
>250kW-500kW	5.94
Standalone	4.28
Export Tariff	4.85

Domestic RHI tariffs

Technology	RHI rate (p/kWh)
ASHP	7.42
Biomass boilers	7.14
GSHP	19.1
Solar thermal	19.51

Green Deal*

Month	Assessments	Live GD Plans
June 15	16071	1112
Total	575936	9999

Green Deal supply chain*

Month	Assessor organisations	Providers	Installers
June 15	-03	-02	-39
Total	387	179	2129

***The Green Deal Finance Company is now closed to new applications**

(Source: DECC)

Cost comparison of heating fuels (not including RHI payments)

Fuel source	kWh provided per unit of fuel	Efficiency of system (%)	Units consumed by house (kWh)	Price per unit of fuel (£)	Units consumed per annum	Cost per annum
Heating oil (kerosene)	10 per litre	90	25300	0.33 per litre	2530 litres	£834
Wood pellets	4800 per tonne	94	24300	252 per tonne	5 tonnes	£1,260
Natural gas	1 per kWh	90	25300	0.04 per kWh	25300 kWh	£1,012
LPG	6.6 per litre	90	25300	0.38 per litre	3833 litres	£1,457
Electricity	1 per kWh	100	23000	0.14 per kWh	23000 kWh	£3,220
*Air source heat pump	1 per kWh	290	7931	0.14 per kWh	7931kWh	£1,110
*Ground source heat pump	1 per kWh	360	6389	0.14 per kWh	6389kWh	£894
Dual mode system 1						
Oil boiler (30% of heat load)	10 per litre	90	7590	0.33 per litre	759 litres	£250
*Air source heat pump (70% of heat load)	1 per kWh	290	5552	0.14 per kWh	5552 kWh	£777
Dual mode system 2						
Gas boiler (30% of heat load)	1 per kWh	90	7590	0.04 per kWh	7590 kWh	£304
*Air source heat pump (70% of heat load)	1 per kWh	290	5552	0.14 per kWh	5552 kWh	£777

Based on 23,000kWh needed to meet typical household's heating and hot water needs per annum. Prices and costs are indicative only and may vary.
*Calculations based on continuous operation at maximum efficiency. Fuel costs taken from Nottingham Energy Partnership and other sources.

RHI non-domestic rates

Tariff name	Eligible technology	Eligible sizes	Tariff rate (pence/kWh)	Tariff duration
Small biomass	Solid biomass: Municipal solid waste (inc CHP)	Less than 200 kWth	Tier 1: 4.40 Tier 2: 1.17	20
Medium biomass	Solid biomass: Municipal solid waste (inc CHP)	200 kWth and above, less than 100 kWth	Tier 1: 5.18 Tier 2: 2.24	20
Large biomass	Solid biomass: Municipal solid waste (inc CHP)	1000 kWth and above	2.03	20
Small ground source	Ground source heat pumps, water-source heat pumps, deep geothermal	Less than 100 kWth	Tier 1: 8.84 Tier 2: 2.64	20
Large ground source	Ground source heat pumps, water-source heat pumps, deep geothermal	100 kWth and above	Tier 1: 8.84 Tier 2: 2.64	20
Solar thermal	Solar thermal	Less than 200 kWth	10.16	20
A2W heat pumps	ASHPs	All	2.54	20

(Source: OFGEM)

Domestic RHI deployment

Technology	Accreditations (since Apr 14 - June 15)	% of total
ASHP	16057	43
GSHP	5137	14
Biomass	9530	25
Solar thermal	6692	18
TOTAL	37,416	100

(Source: DECC)

Who: Alex Basile, marketing director of Globus Homes

What: Globus Homes is a heating and plumbing supplier based in Chelmsford, Essex

Grand designs: Marketing director Alex Basile aims to make Globus Homes one of the UK's leading heating and plumbing suppliers

A world of difference

Monday
Every day I start my morning by checking my emails, these are checked throughout the day and all emails are replied to within the day. Every day I arrive at our head office in Chelmsford, Essex at 9 am.

My week starts by checking our online and trade counter sales figures over the weekend. A sales summary is given to me for the week and the total for the month. This is compared to the previous month and the same month during last year. I will then hold meetings with the different team members from the marketing and sales departments and warehouse staff giving responsibilities and direction on how the departments can be improved.

Tuesday
Tuesdays can vary however having visits from different companies who would like us to sell their products online is very common. Globus Homes online is becoming the place to go for heating and plumbing engineers and the company is slowly diversifying into different products from plumbing and heating products to renewable energy.

Wednesday
Today I will have a meeting with the marketing department discussing how we are currently marketing various products and I will analyse what the return on investment is. We will be discussing new avenues of reaching the market place as well as discussing ideas on new products which will help us gain a bigger market share. The team will also be advising me on their new ideas for future promotional material for email marketing and the website.

Thursday
Every Thursday I am given an update from the sales and accounts team on the turnover and profit for the week thus far, as well as what has been sold and the quantity of each product. The Globus Homes website has recently introduced a range of new solar PV installation kits at very competitive prices so today we will be analysing how many we have sold and what we can do to sell more.

Friday
I will have a working group with the marketing and web design staff. A summary of what we have done to improve our website from search engine optimisation to social media is given to myself and the team. I then advise the team on what we want to achieve and use my marketing experience to direct the team on how we can improve our brand awareness. We will also confirm which email marketing template and promotion we will be using for the next campaign and analyse the email campaigns and website analytics. A graphic designer will be present at the meeting to discuss literature and marketing material that the company will be using.

I am also available over the weekend via mobile phone and regularly call employees who are working on those days

EDMUNDSON ELECTRICAL GREENTECH

ELECTRIC CENTER GREENTECH

THE GREEN ENERGY DISTRIBUTOR
LOCAL STOCKS – LOCAL SERVICE

BELFAST	028 9066 1177
CHELMSFORD	01245 449000
CHELTENHAM	01242 221948
DARTFORD	01322 555485
DONCASTER	01302 320241
DORCHESTER	01305 251696
DUNDEE	01382 814931
EDINBURGH	0131 453 2311
GALASHIELS	01896 754829
GLASGOW	0141 420 3006
INVERNESS	01463 713388
LONDON	020 8963 6800
MACCLESFIELD	01625 618600
MIDDLESBROUGH	01642 241881
NORWICH	01603 405123
PETERBOROUGH	01733 898444
PLYMOUTH	01752 668585
PORTSMOUTH	023 9220 1220
RUGBY	01788 555200
SHREWSBURY	01743 441464
STOCKTON ON TEES	01642 675032
SUNDERLAND	0191 516 0044
SWANSEA	01792 583777
WIGAN	01942 821754

Full range of Solar PV stocked at all these locations!

www.eel-greentech.co.uk • www.ec-greentech.co.uk

FAST RENEWABLE FINANCE

We're part of your eco friendly family!

- Biomass boiler finance
- Solar panel finance
- Installation finance
- Renewable finance

Nationwide has over 40 years of experience providing finance to business clients and some of the cheapest rates on the market.

Renewable Energy Finance for Your Clients

- 100% finance available - No charges against land or Property
- Decisions in 3 hours - Fixed monthly payments
- Payments can be 100% Tax deductible - We can pay suppliers in stage payments
- We finance all commercial projects from £10,000 to £1 Million

100% tax deductible products available*

Decision within 3 hours

Stage payments available

No deposit needed

Finance only available to business clients

*Subject to status, product & tax position

call us on **01234 240155**
or visit **www.ncfplc.co.uk**

feefo
Our customers rate this excellent service 100%

ncfplc.co.uk is ranked 9.7 out of 10.
Based on user reviews.

NATIONWIDE
CORPORATE FINANCE LTD

9 Osier Way, Olney Office Park, Olney, Bucks, MK46 5FP | Registered in England 4582994
Authorised & Regulated by the Financial Conduct Authority for Consumer Credit: 633897 | Nationwide Corporate Finance Ltd