Renewable
ENERGY INSTALLER THE BUSINESS OF MICROGENERATION

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TURNING POINT

Industry reacts to RHI launch

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How soon is now?

This month's choice of editorial heading should please any eagle-eyed fans of The Smiths out there, but was arrived at for a far less frivolous reason.

The long wait for the domestic RHI is thankfully now over, albeit for the benefit of those of us not yet expired having held our collective breath for too long.

There was no official fanfare and somewhat fittingly for a scheme which can claim to be a 'global first', news of its birth was spread in the first instance via the modish medium of Twitter.

Understandably, feelings have been mixed from an industry bruised by DECC's handling of the Feed-in Tariff and repeated last minute postponements to the opening of the scheme. But the wonderful opportunity we have been gifted should be grasped with both hands to reach out to consumers previously unswayed by the standalone case for renewable heating.

For readers with questions about the RHI or wishing to register customers for payments, Ofgem has set up a dedicated website and is also fielding enquiries on Twitter at @AskDomesticRHI.

DECC is also keen to engage further with installers and has agreed to field policy-related questions from REI readers which will be answered in next month's issue. Please email me at **paul@andpublishing.co.uk** and I will ensure they are brought to the relevant individual's attention. Alternatively, members of the DECC team can be met face-to-face at the RHI Roadshow which is touring UK venues throughout May and June (dates overleaf).

I'd also like to remind readers that REI now proudly owns the Renewables Roadshow. Coming to a venue near you in autumn 2015, the shows will be preceded by the Energy Efficiency & Renewables Awards this September, where we currently await your nominations.

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'We are expecting the RHI to do what the Feed-in-Tariff did for Solar PV" P6 Paul Joyner, SBS

Events

All-Energy Exhibition
21-22 May 2014 Aberdeen
http://www.all-energy.co.uk/

SolarTech UK
24-25 May QE2 Conference Centre, London
http://greenworldconferences.com/

Intersolar Europe
02-04 June Munich, Germany
http://www.intersolar.de/en/intersolar-europe.html

Nextgen 2014
08-09 October Stoneleigh Park, Warks
http://ebec.nextgenexpo.co.uk/

Solar Energy UK 2014
14-16 October NEC, Birmingham
http://uk.solarenergyevents.com/

Energy Efficiency & Renewables Awards
26 September, Kensington Roof Gardens
www.renewableenergyinstaller.co.uk/awards/

Heating & Renewables Roadshows
Autumn 2015

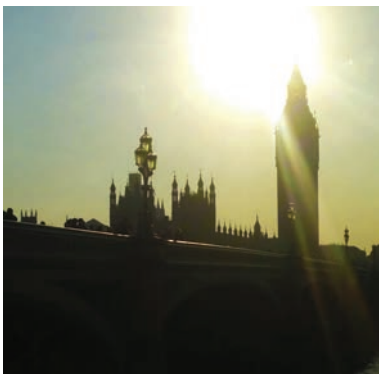
RHI Roadshows
01 May RHI Roadshow West Wales. Park Hotel, Aberystwyth
02 May RHI Roadshow South Wales. Village Hotel, Swansea
07-08 May Greenbuild. Manchester Central
17-18 May Scottish Homebuilding & Renovating Show. SECC, Glasgow
21-22 May All Energy Expo. Aberdeen Exhibition Centre
17-19 June All Energy Environment Expo. ExCel, London
26-27 June Eco Technology Show. The Brighton Centre
28-29 June The Southern Homebuilding & Renovating Show. Sandown Park, Surrey

Government launches Solar Strategy

The government has launched the first ever Solar Strategy for an EU member state setting out ways in which it will boost deployment of the technology throughout the UK.

Key elements include:

- Confirmation of Greg Barker's target of 20GW of solar by 2020
- A target to double the number of homes with solar to 1,000,000 by 2015
- 1GW of solar to be installed on government buildings
- A shift from large solar farms to populating south facing commercial rooftops



Homegrown: The UK government will use its own estate to support the growth of the commercial rooftop market

Climate change minister Greg Barker said: "We have put ourselves among the world leaders on solar and this ambitious strategy will place right at the cutting edge.

"There is massive potential to turn our large buildings into power stations and we must seize the opportunity this offers to boost our economy as part of our long term economic plan."

The STA, which co-chaired the strategy, has praised DECC for launching the first such strategy in Europe and committing to large scale PV deployment on its own buildings.

"It's a clever move by the UK government to start strategising to maximise its stake in a global market estimated at $134bn by 2020," said Paul Barwell, STA chief executive.

"The industry couldn't be keener to work with DECC to realise the benefits of solar power for householders and for UK plc."

REI acquires Renewables Roadshow

Renewable Energy Installer is pleased to announce the acquisition of The Energy Efficiency Exhibitions & Renewables Roadshow, which will return to UK regions in September 2015.

Launched in 2011, the shows and accompanying awards have become a firmly established fixture in the industry diary due to the popularity of their unique, regional format.

Previous owners Energise, and its managing director Dan Caesar, will continue to work in partnership with REI to deliver the shows, which will return as The Heating & Renewables Roadshow.

"I am delighted to welcome such a well-respected series of events to our portfolio," said Nick Smith, managing director of REI's publisher Ashley & Dumville.

"The roadshow is an excellent fit with our existing products and will support REI's continued growth as an authoritative voice and the industry's leading title."

Energise managing director, Dan Caesar, added: "I am delighted to be working with a company that has an impressive level of experience and an in-depth understanding of our sector.

"REI is an indispensable read for installers and industry decision makers and our collaboration can only add to the anticipation of next year's events."

REI can also confirm that the Energy Efficiency & Renewables Awards will take place this autumn on 26 September 2014 at London's Kensington Roof Gardens.

Nomination packs to enter 15 categories can be requested by emailing **Team@EnergiseEvents.co.uk** or to discuss sponsorship opportunities, contact Jonathan Hibbert on + 44 (0) 1565 626760.

RHI to tackle fuel poverty

DECC's head of the domestic RHI has set his sights on tackling fuel poverty now that the landmark scheme has got off the ground.

His pledge comes amid criticism from OFTEC that the high capital cost of renewable heating technologies has resulted in the policy prohibiting 'all but the wealthy few'.

Speaking at NIBE's VIP Installer Conference in Nottingham on 10 April, Patrick Allcorn conceded that fighting fuel poverty had not been an immediate objective in the scheme's early stages, but recognised the need to widen its appeal to all demographics.

He said: "The RHI isn't specifically designed to solve fuel poverty. That said, social landlords have the opportunity to bulk deliver and achieve economies of scale.

"We are working with the National Housing Federation and the Carbon Saving Alliance to look at innovative ways to bring the RHI and fuel poverty together.

"It hasn't been our primary focus in bringing the scheme to launch, but it is the next step in developing the policy."

Stephanie Clarke, policy manager at Scottish Renewables, applauded DECC for reversing its original decision to bar social landlords from the domestic scheme, but has appealed for the removal of the burdensome requirement for a Green Deal Assessment on each individual property in order to boost uptake.

She added: "As highlighted by the Scottish Federation of Housing Associations, social landlords wishing to qualify under the RHI must first undergo a Green Deal Assessment for each applicable household – a significant added cost.

Next step: Addressing fuel poverty will soon become a focus of the domestic RHI as the scheme continues to evolve, says DECC's head of scheme design Patrick Allcorn

"Social landlords, though, know their housing stock well, and are likely to have already invested in low-cost measures where they can be carried out.

"Glitches like these must be addressed if we are to see the scheme making a difference to the millions of people who currently live in fuel poverty across the UK."

Get insider knowledge at Energy & Environment Expo

With the domestic RHI now launched, organisations need a thorough understanding of the intricacies of the scheme in order to get the most out of it, advises Fergus Bird, group event manager, UBM Live.

The RHI is a world-leading initiative, with massive commercial opportunities for installers. Yet this much-delayed, much-discussed scheme still remains poorly understood by the industry at large.

Energy & Environment Expo – a major event in the 'green' calendar and London's largest exhibition of its kind – represents an opportunity to get the full story on the RHI and other important industry issues affecting installers. The trade show, which runs from 17–19 June 2014 at ExCeL London, will be hosting DECC's RHI Roadshow event, as part of its comprehensive visitor experience.

Top-level speakers from DECC, Ofgem and MCS are lined up with five hours of seminars and debates at the RHI Roadshow stand. These seminars, coordinated by Energise, will cover the application process for the RHI; how to establish installer readiness; metering and RHI; and a panel discussion on how RHI will transform the way we heat.

In addition to the RHI Roadshow seminar programme, Energy & Environment Expo has a further line-up of leading energy-sector speakers and exhibitors. Organiser UBM Live – whose experience of running events includes EcoBuild – has commissioned extensive, independent sector research to help shape the overall theme of the show: 'Making Buildings Work Better'. Martin Russell-Croucher, director of sustainability at RICS, is just one of the prominent figures in the sustainability arena to speak at the event. His presentation, entitled: Measuring Carbon in Buildings will be of interest to both installers and end-users.

Energy & Environment Expo is free to attend, giving installers the chance to source new products, network with their peers, and hear from Europe's leading players in the renewable energy sector – all under one roof. **www.energy-enviro-expo.com**

Seeing is believing

The industry has been talking about it for five long years but as of Wednesday 09 April, the domestic RHI has finally become a reality. The sector gives its reaction.

With the stakes so high for a sector already battered by three damaging delays, the news that the regulations had been signed into law and that Ofgem was open for applications was understandably greeted with much enthusiasm.

For manufacturers, suppliers, installers and sellers of biomass, solar thermal and heat pumps, work can now begin to attract the large numbers of consumers incentivised by the financial package on offer to move away from fossil fuel boilers.

"It's great to hear that, after many delays, the criteria for the domestic phase of the RHI has finally been confirmed. By encouraging end users to switch to renewable heating products, we should see an increase in the uptake of technologies," summed up Mustafa Findik, md of **Ariston UK.**

Mark McManus, md of **Stiebel Eltron UK,** added: "We have been waiting a long time for today's announcement, but now that it is here it has the potential to transform the uptake of renewable technologies in the UK."

Confidence boost

Both Plumb Center and Sustainable Building Solutions pointed out the impact that 750,000 installations predicted by 2020 will have on the size of the sector and the supply chain.

"We are expecting the RHI to do for the renewable heating sector what the Feed-in Tariff did for solar PV," said Paul Joyner, md of **SBS**.

"This is a great opportunity for installers to maximise their income by adapting their business to cover all aspects of each RHI project – the assessment, the retrofitting of the building fabric, and the installation of the heat pump, biomass, or solar thermal technology."

Plumb Center's renewables director, Simon Allan, added: "The launch is great news for the renewables market and we're sure the government's announcement will give renewed confidence to installers."

Heating revolution

According to Silvio Spiess, ceo of **Innasol**, the introduction of the RHI is particularly timely given the large recent increases in the cost of energy from the 'Big Six'.

He added: "We have some of the least energy efficient homes in Europe and by making the switch you not only save money each year on your heating bills (up to 45 percent) but also help to bring down CO2 emissions. The UK is far behind its European cousins due to a lack of awareness of the modern, efficient and reliable technologies already available as well as the considerable benefits they offer over traditional dirty fossil fuel solutions."

Simon Cross, commercial director at **IXUS Energy**, was in agreement saying: "There's been so much talk around the scheme with many people saying 'we'll believe it when we see it'. Now it has officially been given the green light, there will undoubtedly be a positive knock-on effect. People who are tired of ever-increasing energy bills should consider renewable energy systems like biomass boilers."

Policy milestone

The **Renewable Energy Association** credited the introduction of the domestic RHI with levelling the playing field in the

renewables market following the stimulus already provided to homeowners installing solar PV.

Chief executive, Dr Nina Skorupska, said: "DECC, Ofgem and industry have been working for years on the domestic RHI, and its launch today is a major milestone for the government's green policy record.

"Households off the gas grid now have a financially attractive clean energy alternative to oil and electric heating. Already over half a million people have installed solar power in their homes to cut their costs and carbon emissions. Now millions more can do the same with solar hot water, wood fuel heating and heat pumps."

Similarly, the **Solar Trade Association** said that this was the final piece of the policy jigsaw now that consumers have the full choice of renewable technologies in both heating and microgeneration of electricity.

Paul Burrell, ceo, said: "With the launch of the domestic Renewable Heat Incentive the final piece of support for household solar technologies slots into place. Together with the Green Deal for insulation improvements and the Feed-in Tariff for solar power, householders now have a great choice of government-backed financial incentives to choose from to best suit their clean energy needs."

Andy Borroughs, MD Organic Energy

Paul Joyner,MD SBS

Phil Hurley, MD NIBE

Paying tribute

NIBE has directed much of its praise at DECC itself for launching a scheme it describes as 'game-changing' for renewable heating.

Unlike the Feed-in Tariff, the UK is the only country with a tariff mechanism which pays homeowners for the green heat they produce.

"We would like to offer our thanks to DECC for demonstrating such an unprecedented level of support for renewable heat in the UK – and also to everyone involved in getting the RHI off the ground" said Phil Hurley, **NIBE's** managing director.

"We are optimistic that the wait has meant that industry and homeowners alike will benefit from a better scheme in the long run."

Voice of reason

Navitron has urged the industry to be mindful of over reliance on the RHI when making the financial case to customers to switch to renewable energy when bill savings offer a much longer term motivation.

Stephen Knight, commercial director for **Navitron**, said: "Although today's news is great, it's important for everyone in the industry to remember that government incentives don't last forever. To ensure the longevity of the renewable heating sector, installers and distributors alike should use the RHI as a secondary selling point when speaking to customers – instead focusing on the amount of money that can be saved on annual bills and how a building's current carbon footprint can be reduced by installing renewable heating."

Damage limitation

Neil Schofield, **Worcester Bosch Group's** head of external and governmental affairs, has more cautiously welcomed the introduction of the RHI and questions whether it is enough to kickstart a faltering renewables market amid claims any momentum has already been lost.

He said: "DECC's decision to finally open the RHI for applications is a welcome one for our industry but only time will tell whether this will give the renewables market the lift it so badly needs.

"With everything now in place, can this market recover from its current state, which is a far cry from four or five years ago when renewables was a buzz word and interest was high? The renewables market has underperformed as a result of a series of delays to the RHI's launch, and businesses have been damaged as a consequence. The stationary market we currently have on our hands is certainly a lot more difficult to kickstart than one which is showing signs of growth."

Neil Schofield, Worcester Bosch Group's head of external and governmental affairs

Majority rule

With SMEs accounting for over 99 percent of the UK's 4.5 million businesses, they are a crucial engine for economic growth. **Jed Smith**, head of business support services at Specflue, explains how SMEs can influence government policy when it comes to renewable energy

With a turnover of around £1.5 billion and responsibility for over 14 million private sector jobs, it is clear why SMEs are valued by the policy formers and advisers within government.

In the energy and heating market, SMEs have a key role to play in driving the necessary innovation required to meet strategic targets. The UK has set a legally binding target of cutting carbon emissions by 80 percent by 2050. Achieving this will require a fundamental shift away from gas boilers to alternative heating technologies, the installation of energy demand reduction solutions and, importantly, the development of the necessary skills to enable such a radical transformation.

A great deal of this change will be delivered by SMEs and a supportive policy framework will be crucial to enabling SME-led innovation in the sector.

Building a group of industry stakeholders on a specific issue can help to positively engage policy makers

The low carbon transformation of the building sector is impossible without major intervention to develop policy instruments to incentivise novel technologies, skills and practices. Examples include the government initiated and developed Green Deal and RHI and policy innovation of this scale and complexity is only possible via active collaboration between government and industry.

Big industry players have significant resources with which to engage actively in the policy process. SMEs do not have this capacity. So how can SMEs participate in policy formation in a way that reflects their innovation potential and corresponds to the significant risk that they are undertaking to bring novel solutions to market?

The answer may lie in developing a collaborative and focused approach to policy engagement.

Collaboration with other companies is a great example of engagement and a way in which an SME can influence policy. Building a group of industry stakeholders on a specific issue can help to positively engage policy makers. Groups can offer advice, market knowledge and data that can help government officials make detailed policy decisions based on current and robust evidence.

Another way of being involved in the process is to devote time to responding to government policy consultations. If the response is structured through careful collaboration with other stakeholders and SMEs that have a similar approach, then this will carry more weight and provide an influential medium to shape policy.

In heavily regulated markets like the UK's energy market, trade associations can play a vital role for SMEs, providing policy influencing opportunities and engaging the government on behalf of members. The trade association supplies one voice for members, creating an important representation of industry and its issues. Also, government officials are more likely to speak to a trade association than meeting companies separately. However, while some believe that trade associations are a great tool for shaping policy, others believe that issues can become watered down due to the number and differing positions of members and can lead to campaigns that do not directly reflect all views.

Strength in numbers: Specflue is seeking SMEs to collaborate with and engage policy makers as part of a group, says head of business support services Jed Smith

Specflue is a growing company so we are naturally interested in policy developments. Acknowledging its importance in terms of unlocking low carbon markets, as well as driving innovation and skills, we have therefore taken a strategic decision to develop a more proactive stance in terms of policy innovation. We are now actively searching for other industry players to collaborate with, to develop policy that works for SMEs and the wider low carbon sector.

We have taken a strategic decision to develop a more proactive stance in terms of policy innovation

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Applying the brakes

John Field, energy services director at TEAM, reminds installers why the application process for the non domestic RHI is more than a mere formality

The RHI was set up to parallel the extensive range of support schemes for renewable electricity which raises the question of why there have been so few heating subsidy schemes. The answer highlights a critical issue: electricity is easy to meter and heat is not. Alongside that, heating systems have complex flows and usually involve traditional non-renewable heating plant - often in ways (like immersion heaters in domestic hot water cylinders) that are taken for granted until you need to know whether the heat you are using is from a renewable thermal source which an immersion heater is not.

A universal theme has been that the relevant heat flows have to be metered (except for small fractions of system heat such as buried pipework heat losses) and metering air-transported heat directly is virtually impossible - hence the scheme mainly concerns water and steam based heat generation even if the heat is eventually emitted by air handling plant.

A key stage is obtaining approval from Ofgem which manages the scheme on behalf of DECC. Potential installations have to be put through an application process which is designed (and updated from time to time) to establish that the basic criteria for subsidy are complied with. This ensures that the eligible renewable heat output can be metered and not increased either fraudulently or accidently by traditionally generated heat such as retained gas boilers. The end result is an involved application process requiring a wide range of information and evidence and a stated engineering base for the metering.

In many cases other than the simplest, this application must be supported by an extensive engineer's report (again with evidence) setting down how the metering achieves the scheme criteria.

Quick and easy: RHI applications can take as little as a fortnight, in the simplest cases

This report is titled the Independent Report on Metering Arrangements (IRMA) and has to be carried out by an 'unbiased and impartial' engineer who can demonstrate suitable experience and expertise in heat metering.

TEAM has highly qualified engineers with a track record of delivering successful IRMAs and RHI applications for a wide range of public and private sector clients including supermarkets, police authorities, NHS and local authorities.

Case history: John Field, energy services director at TEAM, says his company has a strong record of achieving successful RHI applications for public and private sector clients

The application process is described fully in publicly available documents on the Ofgem RHI website which you can reach directly and Ofgem have included some brave attempts at an introductory guide with dos, don'ts and common errors. The subsidy starts from the first meter reads which are an important part of the submission of a successful RHI application to Ofgem.

The RHI starts from the first meter reads which are an important part of the submission of a successful application

The time taken for Ofgem to review applications is an important part of the above processes. Our experience has shown that this can be as little as two weeks for high quality applications and longer for more complex ones. The quality of the information provided makes a significant difference in avoiding review delays, formal queries and their resolution.

The overall picture at present is therefore that this is a significant scheme with potentially large and long term subsidy payments but that the application process requires considerable expertise, attention and planning. Barring major revisions to the whole scheme (or worse), the process for longer term review of tariffs is fairly well set down and can therefore be planned for.

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READY

HEAT INCENTIVE

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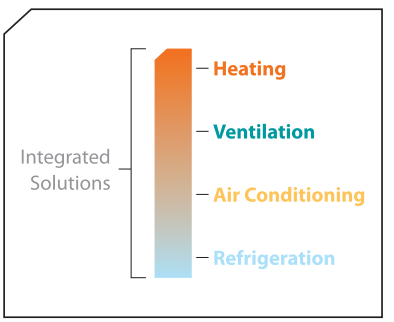
- Dedicated aftercare support

* For more information and terms and conditions on the offers available, please visit **daikin.co.uk/rhi**



Launch party

Following the launch of the Domestic RHI, MCS looks forward to supporting all concerned in making the most of this great opportunity and world's first incentive scheme connected to the generation of renewable heat at the domestic property

Registration of Domestic RHI (DRHI) installations is done through the Ofgem website **https://www.ofgem.gov.uk/domestic-rhi.**

Gideon Richards, chair of the steering group and Interim ceo of MCS, said: "It is really positive to see the final implementation of the Domestic RHI. Having been discussing and working closely with DECC, Ofgem and other stakeholders for a long time, MCS's considerable contribution to enabling the Domestic RHI to be delivered is a credit to all those that have worked tirelessly within the scheme and its voluntary Working Groups to ensure MCS supports the domestic RHI's smooth uptake."

He added: "Recent introduction to the scheme of compliance certificates, updated standards, clarification of competency criteria and amending the MCS database, have all supported MCS readying itself for the Domestic RHI. We now look forward to seeing a sustained and credible growth in all areas of the microgeneration heat sector."

MCS would like to take this opportunity to remind all installer companies they will need to do the following for domestic RHI installations:

- Ensure the installation complies with the MCS Domestic RHI Metering Guidance;
- Ensure the product being installed is eligible for the Domestic RHI by checking the Product Eligibility List (PEL) available on the Ofgem website (**https://www.ofgem.gov.uk/publications-and-updates/domestic-renewable-heat-incentive-product-eligibility-list)**;
- Complete a copy of the MCS Compliance Certificate, if the installation was completed on or after the 16 March 2014; and
- Register the installation on the MCS Installation Database (MID) and upload a copy of the MCS Compliance Certificate to the MID.

Domestic RHI pre-application enquiries from customers can be directed to the Energy Saving Advice Service (in England and Wales) on 0300 123 1234 or Home Energy Scotland (in Scotland) 0808 808 2282.

Customers wishing to apply for the incentive can apply on the OFGEM website: **https://www.ofgem.gov.uk/domestic-rhi**

The OFGEM website contains a range of useful support materials including guidance for installer companies **https://www.ofgem.gov.uk/environmental-programmes/domestic-renewable-heat-incentive**

Pollard's Patter

As we celebrate the launch of the domestic RHI, I am always reminded that incentive programmes can be really instrumental in providing market stimulus, but that only the most short-sighted would become dependent on them.

However, the only certainty of government-backed schemes is that they will change or end with time and transfers in responsibility. Those who have been in the industry a while can recall a legion of different initiatives which have blossomed quickly and withered with equal pace. Boom and bust is no use to business, we need certainty and the confidence to invest with a long term view of returns from which we will recover our costs.

This sounds as if I am not confident about the RHI, which couldn't be further from the truth. I believe that the scheme is well designed, the application process seems to be simple and quick and the incentives seem fair without being over-generous.

But I am equally sure that the market must mature quickly and prove that renewable heat makes perfect sense in the long term with or without financial assistance. However, those of us spending our hard-earned cash need to be convinced that we are not financially at a disadvantage by choosing the renewable option.

Renewable heat systems deserve a 'leg-up' to establish the market to help the early adopters to enjoy their benefits, particularly those who do not have access to gas. Long may it, and you, prosper.

Quality control

The domestic RHI sets out minimum fuel quality standards, without which householders are unable to claim their RHI payments, explains **Robert Burke**, HETAS

HETAS has been working with Gemserv and Woodsure to launch a biomass suppliers list, so that householders will be able to find a local supplier and meet the RHI criteria.

For domestic users, automatic pellet and chip fired stoves and boilers and modern batch fed appliances mean it's now possible to provide lower output heating for the smaller home. Using a biomass stove or boiler offers an ideal way for developers to meet their target carbon emissions, and the domestic RHI makes biomass extremely attractive and cost effective especially in rural areas compared to other fuels like oil.

To ensure safe and efficient operation of wood and biomass appliances, it's essential that a good quality fuel is used. Moisture content has the biggest effect on heat output as any water in the fuel has to evaporate away before the wood or biomass will burn, using up energy and reducing the amount of useful heat as opposed to steam up the chimney.

To help end users identify good quality, sustainable fuel, HETAS certifies the Woodsure accreditation scheme for woodfuel. The scheme has four categories covering logs, chips, briquettes and pellets. HETAS has also been approved as the UK certification body for ENplus by the European Pellet Council (EPC). ENplus is the only Europe wide assurance scheme for pellets which meet the new European standard (EN14961-2) for solid biofuels. As the dedicated certification body for the UK solid biomass industry HETAS is able to certify both producers and traders under the ENplus scheme.

ENplus certification sets out minimum standards for ash content, ash melting temperature, wood pellet size, dust, moisture content and heat output. Pellets with low ash content will burn more efficiently, whereas high ash levels could point to impurities in the pellets such as bark. A low ash melting temperature below 1200°C could lead to clinker, potentially damaging the appliance.

Having a consistent pellet size is important; domestic appliances usually take 6mm pellets whereas commercial boilers take 8mm pellets. Each individual appliance will have been installed and commissioned for a specific pellet diameter, and if the wrong size is used it will affect combustion conditions meaning the boiler becomes less efficient. Wood pellet dust will also affect the appliance by blocking the feed system, and to comply with ENplus wood pellets should contain less than 1 percent dust. ENplus certified pellets should have a moisture content of 10 percent or less and should emit 4800 kW/h of heat per tonne of fuel burnt. Both requirements are important for the safe and efficient combustion of pellet burning appliances.

The scheme also covers distribution as pellets need to be handled correctly in transit, otherwise they can start to break down causing a high percentage of dust in the boiler hopper feed which can clog up the a biomass boiler. All of these issues are addressed by the certification process.

For boiler and chimney manufacturers, fuel quality is also of paramount importance. Burning biomass with high moisture content will reduce efficiency combustion and in some cases affect the figures that manufacturers claim. Installers will get frequent call backs to equipment that isn't working properly, or is expensive to run. The end result is general dissatisfaction with the boiler or heating system – simply because the end user was not using guaranteed quality fuel.

A full list of approved fuel suppliers is available on the HETAS website at **www.hetas.co.uk**.

To ensure safe and efficient operation of wood and biomass appliances, it's essential that a good quality fuel is used

"Heat pump installers face significant reputational risk if the heat transfer fluid they install results in system damage" Andre Murray, Kilfrost P33

CURRENT AFFAIRS

By guest columnist **Bill Wright**, head of energy solutions, Electrical Contractors' Association

At long last the domestic RHI has been launched and is open for business. On the first day of operation, OFGEM accredited its first client for payments and there have been lots of enquiries on its help lines.

Also launched very recently has been the government's UK Solar PV Strategy. This is a first for the government in actually laying down its aims and aspirations for the solar industry and should give encouragement to all struggling PV firms after the earlier FITs debacle.

The strategy targets PV systems on factories, commercial and public buildings such as the 24,000 schools in England and Wales which are singled out for development. It states its short term aim is for over 1GWp on government buildings. Schools will be given particular guidance on how to commission and finance PV schemes on their premises.

Additionally DECC and DCLG will work together to extend permitted development rights for large roof mounted PV systems of up to 1MW.

The hope is that PV will assist in the objective of achieving 15 percent renewable energy by 2020. Currently there is 2.7GWp of installed PV and the government has an ambition to achieve 20GWp by early next decade.

The cost of installed systems may still drop further, but additional financial assistance, such as inclusion of FITs in the Green Deal calculations, would boost uptake.

The future's looking up for PV

Steve Pester, BRE, focuses on the newly-published Solar Strategy and why its drive towards large roof mounted systems is a sound one

Commercial rooftops are where the solar industry is now headed. That's not to say that the domestic market will not continue to improve, but the new strategy document from DECC makes it clear where the government sees the next big push – medium to large scale systems on commercial and industrial buildings.

It is surprising that this large market has not already been tapped – there is an estimated 0.25 million hectares of south facing commercial roof space in the UK. But issues of landlord-tenant contracts, non-portability of PV systems under the FiT, building design life, mechanical loading of roofs and of course that old chestnut, planning delays, have all played their part in holding the sector back.

But it makes complete sense to overcome these barriers because:

- There are no issues with land use – commercial & industrial building roofs are not normally used for anything except keeping the rain out
- The appearance of most buildings in this sector will not be greatly affected by the addition of PV
- The peaks in energy supply and demand are matched in time, thus the on-site use will be high
- High on-site use means lower electricity bills for the occupants and less peaky demand profiles for the national grid to deal with
- With the addition of physical mechanisms to cap the export of power, it may be possible to avoid local upgrades to the grid infrastructure

Via the new strategy document, the government has announced many specific measures aimed at removing the barriers and allowing the commercial roofs market to blossom.

The BRE National Solar Centre has been privileged to be a partner in the writing of the strategy because of our ability to supply robust information to the industry and to government, for example:

- We are collaborating with the Met Office to improve solar irradiance forecasting
- Launched a Biodiversity Guide for solar developers at Kew Gardens on 28 April
- We have already published a planning requirements guide for large scale solar farms
- and we have supplied a study to DECC on jobs and growth in the UK solar sector

Whereas many countries in Europe are struggling, it is clear that the UK is now pushing ahead on solar.

TECH TALKING

Radiation suit

This month, heat pump specialist **Bob Long** looks at choosing the most effective emitter for the job

Having completed an accurate heat load analysis of your project, and selected a suitable heat pump, the next step would be the choice of emitter, influenced by considering a number of factors.

Panel radiators

The most common type of emitter is the panel radiator and would generally be reliant on water flow temperatures anywhere between 65 and 80°C.

This temperature range is not readily achievable by heat pump technology, and although some manufacturers are offering high temperature units, the operational economics will be compromised by the higher temperatures.

Clearly, a retrofit scenario that reduces the operating temperature of the radiator will not deliver the required amount of energy to heat the space, without increasing the size of panel radiator. In some installations this can be achieved but wall space is often the limiting factor.

Further consideration, when retrofitting an existing system, should be given to the water flow rate. A defined volume of water, transported around the system at 70°C, will contain more energy than a similar volume of water at 40°C.

Similarly, the circulating pump capacity must be increased to ensure delivery of an adequate amount of energy. When increasing pump capacity, further consideration should be given to pressure drop which will increase proportionately with higher velocity of water flow.

When deciding if a retrofit is the best way forward, all these factors should be considered, before embarking on a complicated solution.

For a new installation, there are basically three emitter type-options available, fan/coil unit, underfloor pipe matrix, or panel radiators.

Fan/coil units

Fan/coil units are designed to be very compact yet have large capacity. It is important when selecting a suitable unit that the sales literature clearly states the output for the intended water temperature.

Fan/coil units can be wall mounted, where the exterior finish often benefits from a range of visually pleasing styles, or the fan coil units can be located in ducts, which direct and deliver the warm air to various strategic outlets.

The fan coil unit method of energy delivery in perhaps the most versatile of all heat emitting systems available. A suitably sized fan/coil unit can deliver at least the same amount of energy as the most efficient underfloor system, and is suitable for new-build and retro-fit installations.

Underfloor heating

Underfloor heating is often an attractive choice in new-build projects as it provides good heat emission at relatively low water temperatures, and the actual heat exchanger is out of site. The only visible items are probably going to be the supply and return manifolds, but these are usually located in a cupboard.

The heat load of the particular room plays a great role in the selection process, as does the physical size of the room.

The total heat load of quite a large room could probably be accommodated with a single fan/coil unit, but would not promote an even air pattern, and maybe leave one part of the room at a lower temperature, so it is important for the selected unit to not only match the heat load required, but to dissipate the energy evenly. This may require two or three fan coil units, each supplying one third of the required energy, but producing a much more even temperature, than a single emission point.

There are further considerations when choosing emitters, such as water flow rates, pipe diameters, pressure drop, pump selection etc. But a most important consideration not yet mentioned is, of course, your client's lifestyle requirements, and the influence this has on the heating system's overall design.

Two minutes with . . .

Who are you?
Christos Kottis, commercial director at GreenKit

What do you do?
My role involves liaising closely with leading solar PV, biomass, heat pump and energy efficiency manufacturers to select the best products to supply, and ensure we have the right stock in place for our trade customers. It's important to make sure we have what our customers need, when they need it and at the right price in order to remain competitive.

Where are you?
Our head office and national distribution centre is based in Nantwich, Cheshire, and from here we supply installers, house-builders and public sector trades-people across the UK.

How's business at the moment?
It's great, we are really busy at the moment. The solar PV market in the UK is growing steadily again but with the commercial, and now domestic RHI available we are inundated with enquiries for heat pumps and biomass systems to add to our steady stream of PV orders.

How could it be better?
We would welcome a more consistent government strategy on renewable incentives as the constant changes and uncertainty can undermine confidence and negatively affect the market and ourselves as a renewables supplier.

What's the best business advice you've ever received?
It's not so much business advice but something my mentor at Manchester Business School used to say: "Some managers make things happen, some hope things will happen and some wonder what has happened…"

In other words, in a fast-paced business environment, you cannot stay still or rest on your laurels so keep evolving and continually looking for growth opportunities.

Q&A

KEVIN ARTHUR

Oxford PV

REI: What have you got planned for the rest of 2014?
KA: We'll be pushing ahead towards a power conversion efficiency of 20 percent and working on achieving the stability that is needed for our PV technology to be incorporated into buildings. At the same time, we will be exploring the utility market and will also be launching a pretty major funding round. The team is likely to expand by another 15-10 people too. It's going to be a busy nine months!

What do you see as the growth areas for renewables?
Well, clearly, I think solar power is the future. The construction industry used 51 million tonnes of flat glass in 2013 and the potential for building integrated photovoltaics (BIPV) in facades is enormous. This applies to both new schemes and to the retrofit market, where new energy-generating skins will replace out-of-date facades on existing low efficiency buildings.
Renewable energy across the board (wind, wave etc) will continue to grow. New and efficient electricity storage solutions will be key; these will transform the whole market and especially solar.

How is your company cutting its carbon footprint?
By developing low cost and efficient solar cells that can ultimately change the make-up of the global energy market and the UK's role in it.
The Science Park on which we're based is committed to reducing carbon and has installed a solar array, but ultimately it is our core activity that will make the real difference.

Kevin Arthur is Oxford PV's ceo

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SOLFEX energy systems

Good things come to those who wait

With the domestic RHI now officially open, the renewable heating industry can finally move forward with confidence. **Clare Campbell**, product marketing manager for Dimplex Renewables, considers what impact it will have and how installers can take advantage

You could almost sense the industry breathing a collective sigh of relief when DECC announced that the RHI would begin on 09 April - finally ending years of uncertainty over the scheme.

Like many involved with these technologies, I am excited by the opportunities. More than four and half years since the domestic scheme was first conceived, this is the news that everybody in the industry has been waiting for.

It will undoubtedly stimulate the domestic market for renewable heating solutions such as heat pumps, solar thermal and biomass, giving consumers the confidence to invest knowing they will be rewarded for the renewable heat they generate. And for installers, that can only be good news.

For many people, the RHI scheme – and the potential of renewable heating technology - starts here. Even with the tariff announcements last summer, Dimplex has been aware of homeowners who were interested in the technology but after all the delays that the scheme has faced, many were not even speaking to installers until they knew for sure that the funding would be there. Now that a start date has been announced, with guaranteed tariffs for eligible installations over the next seven years, we are expecting to see a surge in the number of installations.

The next step now is to make sure that everybody in the industry – the government, manufacturers and installers – makes every effort to publicise the funding and raise knowledge amongst homeowners. There is a fantastic opportunity for householders to make significant savings to their heating bills with lower payback periods than they might expect.

The key for installers is to be commercially aware, spot the opportunities and take full advantage of support from your manufacturer of choice, from dedicated product training to online or offline heating design tools.

Many homeowners will not be aware that RHI funding is eligible on all MCS-accredited installations registered since 15 July 2009. The RHI scheme also presents a fantastic opportunity to get in touch with previous customers, inform them of their eligibility and deliver added value with the opportunity of further work too. Revisit old order books - and it could pay dividends.

The onus is now on the industry to build momentum and maximise the opportunity

Numbers game: Dimplex is disappointed that the domestic RHI does not reward high efficiency ASHPs like it's A-Class more than lower performing models

Whilst I do not want to dampen spirits now that RHI is finally confirmed, it will be interesting to see how the scheme evolves over time.

The initial tariffs are good and DECC must be applauded for listening to feedback from the industry throughout the consultation phases, taking lessons from the non-domestic scheme into account too. However, it is disappointing that the RHI in its current form does not reward higher efficiency models over run-of-the-mill systems which only meet the minimum requirement.

With air source heat pumps, for example, a high efficiency product like the new Dimplex A-Class, which outperforms the Heat Emitter Guide with SPFs of 3.9 (underfloor heating) and 3.6 (radiators), would not be rewarded any higher than a standard performing product, apart from the ongoing running costs of course. It is an oversight which must be corrected if we are to encourage homeowners to choose better performing products.

Overall, the RHI is a fantastic initiative which will undoubtedly encourage homeowners to choose renewable heat. The onus is now on the industry, as a collective, to build momentum and maximise the opportunity - working towards the EU's legally binding 20-20-20 target that 20 per cent of energy consumed will be produced from renewable resources. If we get it right, the delays will all be forgotten.

Shifting focus

Finian Parrick, managing director of Zero Carbon Future, considers why the government must shift its focus away from the RHI to build lasting consumer confidence in renewable heating

The government's recently opened domestic RHI has the potential to boost business for installers and the commitment of more support behind the industry is an encouraging move.

Combined with the Green Deal, the domestic RHI means renewable heating solutions are now a more affordable investment than ever for homeowners. However, there has been minimal promotion so far of the environmental benefits and, without this; consumers could remain sceptical about investing.

To build lasting consumer confidence and stimulate a widespread commitment to the installation of solar and biomass heating systems, the government must commit to a long-term renewable energy strategy beyond its existing pledge of variable financial incentives.

Payback longevity remains uncertain

Our main challenges are poor consumer awareness of the environmental benefits of renewable technologies and scepticism over the longevity of incentive schemes. If the UK is poised for a heating revolution then the government must do more to address these doubts and promote renewable heat as a beneficial alternative, both financially and environmentally.

Cost undoubtedly remains a key driver for consumers considering how to heat their homes. Biomass and solar technologies typically incur greater capital costs than oil or gas equivalents and payback schemes remain important to ensure customers are able to look past any high initial expenses. Gaining trust in renewable heating will remain a challenge unless we can offer assurance that incentives will continue to offer support long term.

Government cuts to the Feed-in Tariff subsidy for solar panels in 2012 resulted in a reduction in solar installations, demonstrating that consumers are more cautious when investing in renewable energy if it is unclear whether a payback plan will continue to offer consistent levels of payback in future.

DECC's quarterly degression of domestic RHI tariffs is concerning as it could increase the risk of consumers being miss-sold installations with quotes based on out-of-date tariffs. There is also the risk that the government may in future consider introducing a cap and such uncertainty could discourage consumers from choosing renewable heat.

Bigger picture: By relying heavily on financial incentives such as the RHI, we are overlooking other positive marketing hooks such as the environment, says Finian Parrick, managing director of Zero Carbon Future

By focusing on financial initiatives, the environmental reasons for investing in renewables are often overlooked

We must therefore, use the introduction of the domestic RHI as an opportunity to present the benefits of renewable heat as a cost-effective and sustainable alternative to ensure lasting confidence.

Building an awareness of environmental benefits

By focusing on financial initiatives, the environmental reasons for investing in renewables are often overlooked. In our five years' experience in the UK renewable industry, we've witnessed growth in the domestic renewable energy market and the domestic RHI could boost demand further. Its introduction means installers are now able to advise homeowners exactly how much they could earn as financial payback through a renewable energy scheme, but consumers must also be convinced by the environmental benefits.

Overall, Zero Carbon Future supports the introduction of the domestic RHI as a positive move towards creating more accessible renewable energy for domestic users.

We remain confident that given the right guidance from the industry and support from the government, UK consumers will gain widespread understanding of the environmental benefits in renewable heat technologies and not base their decisions on the potential financial rewards.

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Market liquidity

Brian Pickworth, technical manager at Kingspan Klargester, and chair of the UK Rainwater Harvesting Association, talks REI through safe and effective installation of rainwater harvesting systems

After the wettest winter since records began in 1910, and extensive flooding causing misery for thousands of home- and business-owners across the country, there is little doubt that we need to find better ways of managing our water resources.

Like it or not, climate change has dramatically altered our weather patterns in recent years, causing warmer, wetter winters and hotter, drier summers.

The UK needs to have tailored, localised strategies both to reduce the impact of future droughts and to lower the risk of future flooding. Part of this strategy will be storing and reusing rainwater in-situ, bringing financial benefits to users, but also providing a much needed water source in drought conditions

Why rainwater harvesting?

Part G of the Building Regulations now requires that water consumption is limited to 125 litres per person, per day. Capturing and recycling rainwater for non-potable uses such as flushing loos or cleaning clothes, can reduce the amount of water used within a domestic setting by more than 50 percent, and by up to 85 percent for a commercial building.

However, an interest in rainwater harvesting goes beyond a drive for more sensible use of mains water. Rainwater harvesting systems reduce surface run-off during heavy rainfall and pass the recycled water indirectly via WCs, washing machines etc. to the foul system rather than the storm drains, so that it poses no contribution to flood risk.

How does it work?

Rainwater is collected from the roof of the building and filtered before entering either an above or below ground rainwater holding tank.

The water can then either be pumped directly to WCs and vehicle jet washes or to a high level header/break tank within the building which will then service the non-potable appliances as per normal.

A third option uses a surface-mounted break tank and booster system. This combines benefits of both the direct system and the gravity system, in that the mains water back-up is directed to the break tank.

Systems that serve WCs or washing machines are automatically backed up with mains water at no inconvenience to the homeowner.

Designing a system

Bringing in expertise from the company supplying the system at the very beginning of the project planning will enable you to assess your best options. Unfortunately, all too often this happens when the plumbing is already part-complete which can mean costly rebuilding work to reconfigure the system.

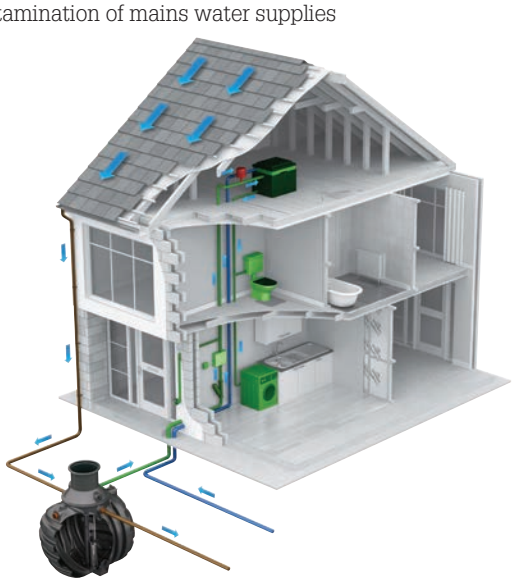
Having a technical team from the supplier on-site also ensures effective co-ordination of the three trades required to install a system correctly: ground-workers, plumbers, and electricians.

Water regulations

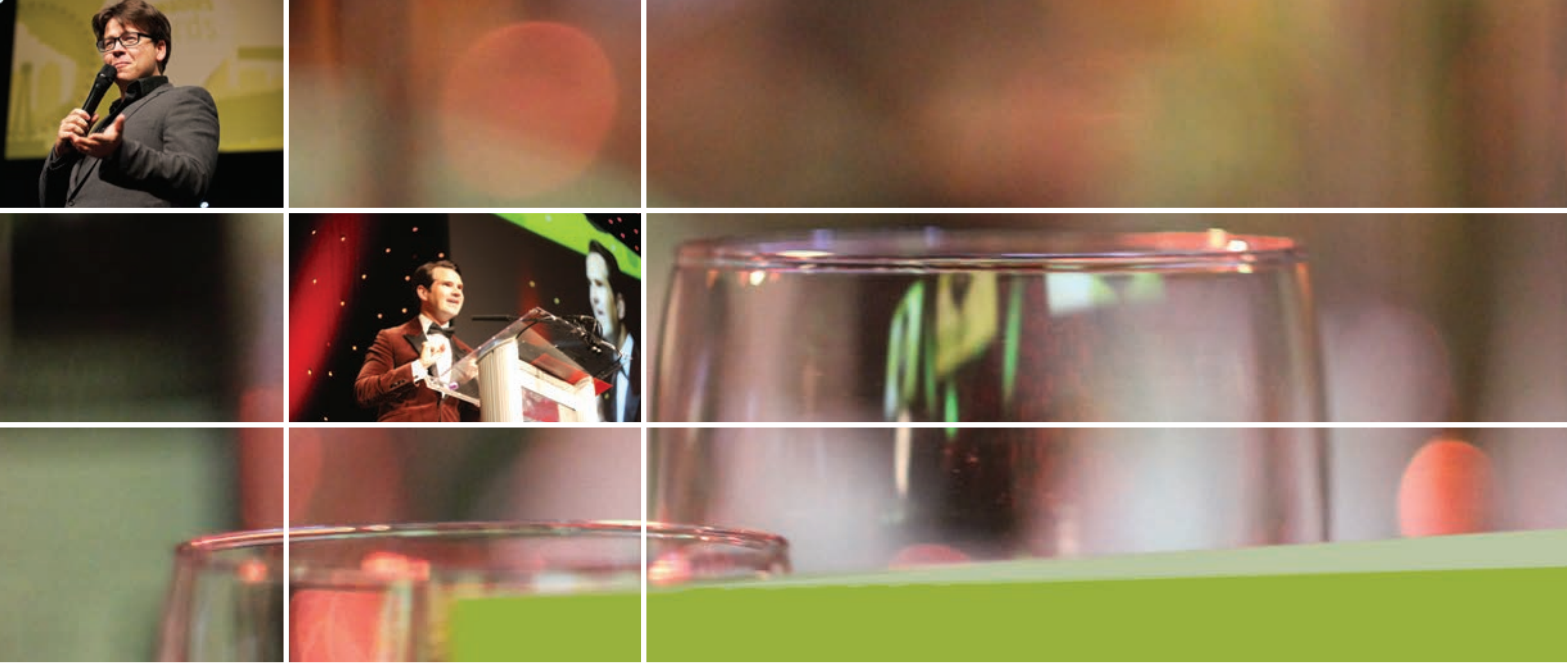
You should be aware that installing rainwater harvesting equipment brings with it new levels of Water Regulations requirements which are vital to protect the public water supply.

Many of the regulations revolve around three principle requirements for rainwater harvesting equipment to comply with.

- Marking and colour coding of the plumbing is a requirement to ensure that pipes carrying rainwater are not accidentally connected into at a later date to satisfy potable water requirements. Rainwater harvesting pipes are black with green stripes – which are available through merchants - while potable water pipes in the house are copper, white or external to the house blue
- The pipework must also be labelled every 500 mm externally
- Type AA or AB air gap in the system is required to avoid any contamination of mains water supplies



Pipe dream: Rainwater harvesting can reduce mains water usage in a domestic setting by 50 percent, and more when used in commercial environments



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Has the sun set on solar?

Chris Kottis, GreenKit's commercial director, dispels the myth that the time to invest in PV is over for homeowners left confused by changes to the Feed-in Tariff and negative media coverage

The most common misconception in the market is that the time has gone to invest in solar, largely fuelled by the government's poor handling of the changes to the Feed in Tariff (FiT). The reality however could not be further from the truth as the cost of installing solar PV and the component products are at their lowest price ever.

Feedback from the installers we supply is showing that the returns remain as strong now as they were when the FiT was at its highest, with solar PV often providing double digit returns on investment. Coupled with the fact that over the last ten years, oil prices have risen by more than 200 percent, gas by 145 percent and electricity by 115 percent, it's likely that returns will remain strong for years to come.

Some customers suggest that they are planning to wait for installation prices to fall further. Market evidence however points to the fact that the drop in the cost of installations has slowed and reached a natural plateau considering the raw material costs. The government has however outlined that the FiT will continue to fall until it is eventually removed in 2018, so again it points to now as being a good time to invest.

Government would do well to more effectively outline its longer term strategy for PV

Naturally finding the initial investment can be a challenge for some, although financial schemes are now increasingly widely available. Some are simply 'renting their roofs' which remains a good option to reduce energy bills, but they face losing out on the excellent 20 year investment returns from the FiT.

Let's also not forget the UN's recent, and most comprehensive, climate panel report which states that there is overwhelming evidence to prove that climate change is real and posing a significant threat to, amongst other things, food security and humankind itself.

Energy secretary Ed Davey said: "The UK government must abandon its short-sighted championing of fracking and oil, and get fully behind energy efficiency and our home-grown renewable power potential instead.

"The only road that leads to both a reduction in carbon emissions and economic growth is one built on a clean industrial revolution. This means investing and innovating now in large scale renewable deployment - most of the energy and technology already exist, but needs rapid scaling up today not tomorrow. For in the long term, prevention will be a lot cheaper than the cure."

It would appear that the government remains committed to solar PV and other renewable technologies although it would do well to more effectively outline its longer term strategy in order to provide a more sustainable platform for installers.

Work must be done to continue to reduce the UK's CO2 emissions. Preliminary figures for 2013 suggest that net emissions of carbon dioxide are estimated to be 464.3 million tonnes, a decrease of 6.4 percent on 2010 figures, although some way off the government's target of reducing CO2 by 80 percent by 2050.

The cost of installing solar PV and the component products are at their lowest price ever

The government also remains legally bound by its commitment to generate 20 percent of electricity from renewables by 2020. With energy security an increasing concern, we're not surprised that the government sees solar energy as a scaleable, easy to install and proven technology that it anticipates will triple its output contribution over the next ten years.

It seems that the sun has far from set on solar but as the industry improves its efficiency, manufactures become more competitive and consumers of energy become more aware of the benefits, perhaps it will in-fact be facing a new dawn for Solar PV.

Sound check: Potential customers should be reminded that PV returns remain as strong now as they were when the FiT was at its highest, advises Chris Kottis, GreenKit's commercial director

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Low priority

Ben Perris, national sales manager of SOLFEX energy systems, takes a look at the advantage of using low build up underfloor heating systems with solar thermal, or an ASHP

With the Domestic RHI now in full operation, it is time to give some serious thought to the value of introducing solar thermal systems to work in conjunction with underfloor heating (UFH). The integration of the two systems has a value added benefit to the end user allowing maximum cost savings on the production of hot water.

Perfect balance

Creating a base load heat, generated from solar thermal panels, will also greatly reduce the running costs of already installed gas / oil boilers. A good UFH system should be designed to run from water temperatures ranging from 35ºC to 55ºC which will balance perfectly with temperatures provided from solar thermal systems.

Applications to take advantage of the scheme opened on 09 April and are administered by Ofgem.

With the price of fossil fuels making a gigantic rise now and in the coming years, home owners and developers should start to take into account the benefits of providing such systems within their households.

Traditionally, UFH has been seen as an exclusive product. However, this has changed and is now seen to be the most efficient type of green heating within the industry. The popularity of UFH with new build developers and the self- build market has become a way of adding additional value to properties. By encompassing all of the renewable technologies, this has enabled the homeowner to be the one in control of their fuel usage.

Minimal disruption

For all new build and retrofit markets, UFH products have always been of a similar design with traditional wet screed systems and timber joist products. But with the introduction of low build up products into the market, this has opened a completely new way forward in the construction of houses. The market has seen an increase in the different types of low build up products, thus giving the homeowner /developer the ability to add UFH with very little in the way of disruption. Combining the addition of a solar thermal system or ASHP, the two systems work in conjunction with each other and reduce the overall running costs of the property.

Low build up UFH is a fast and easy way to install a low temperature heating system in the home. The build-up of approximately 15mm or 18mm of high density dry screed board, which acts as a heat conducting surface, transfers the heat from pipes to the heated floor above. Once up to temperature, it delivers sufficient heat output to provide warm and even ambient temperatures within the living space.

The popularity of UFH with new build developers and the self- build market has become a way of adding additional value to properties

The way forward

The best floor coverings to combine with these types of systems are hard surfaces such as stone and tile, as they offer the least resistance to heat transfer compared to carpets. The main benefit of this type of construction is the option for the direct application of tiles, which can be applied directly with the use of flexible adhesive. However, in most instances, a 6mm ply cover is recommended prior to tiling. When floor coverings such as carpet are to be fitted, the system design must factor in the extra heat output that will be needed; this loss in output needs to be negated by increasing the flow temperature.

These types of products are the way forward for the building trade over the coming years. It will reduce the installation time on site and eliminate the long drying times of screeds. The whole installation process can be completed in a much quicker time frame. This will itself be an added benefit to the schedule of works on site.

Time saver: Using low build UFH will significantly shorten installation time of this increasingly popular technology, says SOLFEX's national sales manager Ben Perris

Realising returns

Tim McLeman, technical director at Wood Energy, discusses the challenge of delivering returns across the lifespan of the RHI

It's now been over two years since the launch of the non-domestic RHI. However, many customers still remain unaware that RHI tariff returns are tied directly to the installed product by its serial number. This is significant as the warranties on many renewable technologies fall well short of the scheme's 20 year return period. As a result, if the technology breaks irreparably all future RHI payments are lost.

Reviewing the scheme to date

There is no question that small and medium sized biomass boilers have been the great success story of the non-domestic RHI. Whilst overall uptake in the scheme is lagging behind target, installations of biomass boilers below 1MW have far exceeded expectations, making up 93 percent of the 3,122 accredited RHI installations to January 2014.

In December there was further good news for the industry with the government announcing a range of changes to the non domestic RHI. These changes are aimed at getting the country back on course to meet its legal obligation to deliver 15 percent of energy demand through renewables by 2020. Large biomass boilers (1MW and above) are one of the technologies to benefit from these new incentives. From April the tariff on all large biomass boilers installed after 21 January 2013 will double to 2p/kWh.

Based on these new tariffs and information from a range of industry sources, DECC has produced a series of Market Intelligence scenarios for RHI deployment, suggesting over 4,000 biomass boiler installations could be completed in 2015/2016 alone. Whilst these scenarios remain a 'best guess' and are subject to a great deal of uncertainty, they still paint an extremely encouraging picture for the biomass industry, particularly with the upcoming launch of the domestic RHI.

Avoiding the pitfalls

The long-term success of the scheme does not simply depend on increasing the number of renewable energy installations completed. With tariff payments tied into quarterly meter readings over 20 years, it is essential that the technologies not only last, but perform to a high standard throughout this period, ensuring a maximum return for the end user.

This is a considerable challenge for many of the technologies covered under RHI and biomass boilers are no exception, with the large majority of units currently on the market warrantied for a period of five years at most. It is therefore essential that all installers and suppliers are upfront with customers, explaining the importance of installing top quality biomass boilers and providing clear guidance on the maintenance required to keep them operating efficiently. This will allow them to make a fully informed decision about the costs and benefits they can expect to gain by taking advantage of RHI.

Several medium and large biomass boilers have been installed in container solutions. These offer several advantages in terms of reduced installation time and space loss within buildings and also make it much simpler for a customer to move the biomass boilers, allowing them to retain RHI even if they switch premises. Careful consideration must be given to ensure that the containers are properly ventilated and that their external appearance will not rapidly deteriorate, causing them to become an eyesore

The future is looking bright, both for biomass boiler suppliers and installers, and the renewables industry as a whole, providing they tackle these issues head on and make sure that customers get the maximum possible return from their investment.

The warranties on many renewable technologies fall well short of the scheme's 20 year return period

Words of wisdom: Tim McLeman of Wood Energy warns that as RHI payments are tied to a product by its serial number, it is vital these technologies last for the full 20 year term or all future payments are lost, underlining the importance of an effective warranty

Satisfaction guaranteed

Helen Timperley, director of Wood Boiler Supplies, urges installers to utilise Project Management to guarantee satisfied customers and better end results

We all know that the key to a happy customer is excellent service… regardless of how good our product is or how new and exciting the technology; if we don't deliver what we say we will, when we said we would, then that's when the customer feels let down.

The recent domestic RHI announcement is going to generate an upsurge in renewable heating installations, which is great for the industry; but what many of us fear is potential backlash from the general public based on stories of poor installations and poor service.

Project Management is a tool that you can use to help ensure that you are able to deliver the service that is going to get you recognised by your customers and ensure that word of mouth recommendations become your main advertising method!

What is Project Management?

"At its most fundamental, project management is about people getting things done"
Dr Martin Barnes

The Association of Project Managements (APM) definition of a project is *"a unique, transient endeavour, undertaken to achieve planned objectives, which could be defined in terms of outputs, outcomes or benefits. A project is usually deemed to be a success if it achieves the objectives according to their acceptance criteria, within an agreed timescale and budget."* Sounds like every one of your jobs, right? So Project Management is just a way of managing things to get the best result.

It is a huge subject, with many tools and techniques that you can pick to best suit the size and scale of project that you are working on. But a few key tips are:

Scope Management: Always spend as much time as you can in the early stages to work out the full scope of the project. What are the customers' reasons for wanting renewable heat, how are they going to use it, what budget do they have, how quickly do they need it installed, what is the best design, how does it need to be integrated, what are the risks? The list goes on. If you can accurately define the scope of the project early on, then you will be able to plan and deliver much more accurately; hence avoiding the otherwise inevitable consequence of going over time, over budget, or not delivering the quality expected.

Stakeholder Management: Communication and expectation management are key. You need to make sure that the end client, the architect, any planning officials, and potentially other affected parties are all in agreement, and understand what is going to be happening and when. If things change (which they often do), then make sure that everyone knows as soon as possible, and be able to tell them what the new plan is. People understand that unexpected things happen – what they don't like is being kept in the dark until the last minute.

Planning: Every project follows a lifecycle: Concept -> Planning -> Execution -> Handover.

For renewable heating installations, planning is really important

Planning is not just time scheduling (which is a major part – biomass boilers unfortunately don't grow on trees, they have to be ordered, and there is often a lead-time!), but also includes looking at costs, deciding on the resources needed (both people and equipment), and evaluating contingencies. Don't get caught in the trap of being under pressure to deliver projects sooner and more cost-effectively than is realistic!

There are a wealth of skills that you can use from Project Management to help you deliver the best installations – choose a few that you think will work for you and try them out!

Covering the bases: Widespread use of Project Management will mitigate the risk of poor customer service from within the sector, according to Helen Timperley, director of Wood Boiler Supplies

Crowning glory

Martin Dowley, managing director of 7Energy, proudly argues that biomass is the king of renewable heating

It comes as no surprise to me that a review of the national uptake of the non-domestic RHI has shown that biomass installations massively dominated the spending figures.

While there are many options for generating heat from renewables, none of them are as readily available to install and can be up-and-running in a predictable timeframe, and with predictable costs, as biomass.

Perhaps it helps that a boiler is something we all understand; which makes it a much easier sell to the board, the facilities manager or whoever is making this critical decision.

However, when you look closely at the expenditure versus forecasts for the RHI to-date, it's very clear that large organisations are not necessarily the ones investing in biomass boilers. Take up of the incentive for small (less than 200kWh) installations is running 173 per cent ahead of expectations, with medium biomass projects (up to 1MWh) taking 151 per cent of forecast spending. Larger installations are only 27 per cent of what was expected to be spent and even at that rate are way ahead of the uptake of other technologies (for instance, only eight per cent of the forecast spending on biomethane has been taken up).

So it's smaller organisations which are being the most fleet of foot with this opportunity. And you can see why. For a larger project, be it replacing an ageing traditional boiler or powering new premises, they have to get it right, so you can't blame those who have to make the decision for an abundance of caution.

What they will inevitably come to understand, I believe, is that when biomass is assessed against other renewable options, it comes with hugely less entries in the downside column. Other solutions can tend to have more variables, such as planning processes which can stir up community opposition, particularly in the case of AD plants. There is also usually less in the way of needing to find novel solutions for individual boiler installations.

In biomass we have a relatively simple process to burn recognisable fuels, using technology that doesn't differ massively from what we've known for decades and which is supported by robust manufacturers with well-functioning supply chains and maintenance backup.

Looking at wood pellets, they go through a manufacturing process and there is the kind of traceability in the supply chain that appeals to large organisations with a serious corporate social responsibility agenda – so the sustainability box is easily ticked.

Add to this the ability to demonstrate impressively quick payback, thanks to the RHI effectively covering the annual fuel costs for many users, and the reasons not to go down this route begin to vapourise!

Even so, I encourage customers to view the investment without the distorting prism of the RHI and the figures still stack up impressively. Factor in the still uncertain debate around central power generation and the costs of building more nuclear capacity, and then there is an appeal in taking costs into your own hands.

Right now, biomass makes sense in many scenarios and will probably do so increasingly in the domestic setting as well, particularly once the RHI extends its reach there.

This imbalance in technology uptake is already being tempered by a 'degression' scheme which adjusts the incentive level downwards as uptake of a particular solution rises, but I would doubt this is enough to dampen the enthusiasm for biomass as the renewable heat solution of choice. Whether biomass keeps its current share of the subsidy or not, the payments are all helping it to make its case by lessening the investment risk while demonstrating that the technology stands on its own two feet.

Biomass comes with hugely less entries in the downside column

Stand alone: The financial case for installing biomass outweighs other renewable heating technologies regardless of the RHI tariff, says 7Energy's Martin Dowley

Adjusting to change

John Felgate, Stiebel Eltron UK technical director, focuses on fine tuning heat pump systems for today's more exacting customers

There has been a general movement in recent years to make the energy that consumers use more apparent to them, in the belief that this awareness will lead to behavioural change.

It follows that consumers should therefore be educated to understand and use their own heating systems effectively – particularly when it comes to new technology such as heat pumps.

I want to go through some of the basic and more advanced controls that can be used to maximise efficiency. This information can be passed on to consumers who are confident with technology and are interested in their systems – and alternatively provides an opportunity for installers to add value through service contracts with routine monitoring and adjustment.

Let's tackle why you might need to change initial settings.

1. It is never possible to exactly match the performance of a pump to a property until all the factors of the immediate environment, performance of chosen emitters and performance of the building itself have been fully brought into the equation. This means essentially that until you have the data from a system that has been running for weeks, months and even years, you won't have a full picture on which to base decisions.
2. Changing lifestyles. As examples, hot water and heating consumption rises dramatically when children arrive on the scene; in social housing situations the residents of properties may change – a family may replace an older resident moving into sheltered accommodation.

Basic performance tuning for heat pumps

It is as easy to change the timers and programme settings on heat pumps as it is for a boiler. However, there are a few more advanced controls to consider here. We start of course with the heat pump mantra that: *'The lower the temperature of the water going through the system, the more efficient it will be'*.

The two basic settings on a heat pump that can be adjusted to change this balance are:

1. The heat curve (weather compensation). This sets the water temperature for heating depending on the outside air temperature.
2. The room temperature setting. This raises or lowers the water temperature to give you the room temperature you require. Lowering the water temperature by adjusting the curve and the room temperatures has a major impact on efficiency, but at the cost of heating response times.

Fine tuning: Educating consumers on the advanced settings of heat pumps and customising systems for their individual needs can provide installers with an added value service, says John Felgate, Stiebel Eltron

Additional refinements to consider include:

Kelvin minutes

This setting looks at the temperature of the water in your heating system and compares the set temperature with the actual water temperature. If the temperature is close to the set temperature it waits a relatively long time before recalculating. If the differential is large it waits a short time before recalculating and adjusting the effort up or down.

Summer mode

This setting takes an average temperature over a given period of time to decide if the weather is warm enough to switch off the heating altogether and provide only hot water. I would always advise setting it up to take advantage of spells of fine weather in spring and autumn and avoiding turning it on during short spells of cooler weather in summer.

Pump cycles

The pump that circulates the hot water in the system can simply run continuously when the thermostat calls for the heat to be turned on. However, it is more efficient to set a pump to 'pulse', running for a few minutes at a time, a certain number of times an hour. This both saves energy and can extend the life of your system. Gradually testing how far apart pulses can be timed without a noticeable impact on comfort is a key part of an advanced fine-tune of a heat pump's performance.

Damage limitation

Andrew Murray, senior manager at Kilfrost's speciality fluids division examines the impact of heat transfer fluids on the longevity of systems and the benefits of inhibited glycols

The popularity of heat pumps is on the rise. But if sourced or used incorrectly, heat transfer fluid - a key component - can have major financial implications despite the low initial cost to the customer. This is because the life span and reliability of any heating system depends on the quality of the heat transfer fluid used.

Corrosion concerns

Although UK numbers of GSHP installations are relatively small, they have been increasing. Installations across both residential and commercial buildings have increased from 2,000 to 21,000 per year over the period 2006-11. It is expected that annual installations of heat pumps will reach 49,000 per year by 2015.

Heat transfer fluids are a vital part of the GSHP process. Corrosion of these pumps can lead to many problems; the most significant being damage that may result in fluid leakage. Corrosion within systems can also increase the need for maintenance and expensive repairs.

Many heat transfer fluids are glycol-based. Glycols themselves are not particularly corrosive in concentrate form. However, when they are diluted with water to achieve the required frost protection, system corrosion becomes a real problem for the installer and ultimately the end user. Bacterial growth and scaling within the system can also become an issue as a result of hard and/or inferior water. So, what can be done to prevent rust within systems and to increase their longevity?

Suppliers and installers of systems face significant reputational and financial risk if the fluid they are installing results in system damage

Using a high-quality product and mixing it with poor quality water makes little sense. Mixing an inhibited glycol-based heat transfer fluid with water of a sufficient quality enables the system to last longer by reducing corrosion, bacteria and scaling. This saves both time and money for the customer by limiting the need for maintenance and repairs.

Suppliers and installers of systems therefore face significant reputational and financial risk if the fluid they are installing results in system damage. An efficient inhibited heat transfer fluid gives the installer and the customer greater peace of mind.

As a result, all of Kilfrost's Thermatrans inhibited heat transfer fluids are specifically designed to deliver higher resistance to degradation, scale, bacterial growth and corrosion. They also provide freeze protection, cleaner circuits, efficient heat transfer and long term cost benefits to system maintenance.

Challenges due to lack of standards

As the industry recognises the challenges of system corrosion, an international standard, known as the ASTM D1384 corrosion test standard is playing an increasingly important role.

This involves immersing metals commonly used in heat transfer systems, such as aluminium, iron, steel and copper in an inhibited glycol/water mixture and analysing them in laboratory conditions for signs of corrosion.

The test demonstrates the ability of the fluid to protect sufficiently against corrosion and therefore gives the end user greater confidence. Any fluid can claim to contain corrosion inhibitors but without the presence of a test standard, the extent of protection is impossible to gauge accurately.

Down the tube: Choosing the right heat transfer fluid can have enormous financial implications for heat pump systems despite its low capital outlay, says Kilfrost

Despite its existence, there is still a lack of understanding of this standard in the industry and while it provides a valuable indication as to the quality of the heat transfer fluid, it remains voluntary. There is therefore a need for greater education on the impact of specifying poor quality heat transfer fluids and the benefits that inhibited glycol-based fluids can bring to both the end user and installer.

Figure it out

Generation tariffs for non PV technologies

Technology	Band (kW)	Tariffs (p/kWh)
Hydro	≤15	20.57
	>15-≤100	19.20
	>100-≤500	15.18
	>500-≤2000	11.86
	>2000-≤5000	3.23
Wind	≤1.5	17.32
	>1.5-≤15	17.32
	>15-≤100	17.32
	>100-≤500	14.43
	>500-≤1500	7.83
	>1500-≤5000	3.32

(Source: OFGEM)

Number of MCS registered installers per technology

Technology type	Cumulative number	Registered March 14
Solar PV	2854	34
Biomass	312	08
Air source heat pump	883	17
Ground source heat pump	732	10
Solar thermal	1027	11
Small Wind	107	0
Total	3414	80

Number of MCS registered installations per technology

Technology type	Cumulative number	Installed Mar 14
Solar PV	526508	15546
Biomass	4884	478
Air source heat pump	27885	1105
Ground source heat pump	7872	232
Solar thermal	6279	126
Small Wind	4614	338
Total	578042	17825

(Figures supplied by Gemserv)

Generation tariffs for Solar PV

Tariff band	FiT rate (p/kWh)
<4kW	14.38
>4-10kW	13.03
>10-50kW	12.13
>50-150kW	10.71
>150-250kW	10.25
>250kW-500kW	6.61
Standalone	6.61
Export Tariff	4.77

Domestic RHI tariffs

Technology	Tariff rate (p/kWh)
ASHP	7.3
Biomass boilers	12.2
GSHP	18.8
Solar thermal	19.2

Tariffs apply to all eligible installations installed since 15 July 2009

Green Deal

Month	Assessments	Live GD Plans
Feb 14	17998	136
Total	163096	883

Green Deal supply chain

Month	Assessor organisations	Providers	Installers
Feb 14	08	03	51
Total	352	133	2483

(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	0.58 per litre	2530 litres	£1,467
Wood pellets	4800 per tonne	94	24300	235 per tonne	5 tonnes	£1,175
Natural gas	1 per kWh	90	25300	0.042 per kWh	25300 kWh	£1,062
LPG	6.6 per litre	90	25300	0.43 per litre	3833 litres	£1,648
Electricity	1 per kWh	100	23000	0.16 per kWh	23000 kWh	£3,680
*Air source heat pump	1 per kWh	290	7931	0.16 per kWh	7931kWh	£1,269
*Ground source heat pump	1 per kWh	360	6389	0.16 per kWh	6389kWh	£1022
Dual mode system 1						
Oil boiler (30% of heat load)	10 per litre	90	7590	0.58 per litre	759 litres	£440
*Air source heat pump (70% of heat load)	1 per kWh	290	5552	0.16 per kWh	5552 kWh	£888
Dual mode system 2						
Gas boiler (30% of heat load)	1 per kWh	90	7590	0.042 per kWh	7590 kWh	£319
*Air source heat pump (70% of heat load)	1 per kWh	290	5552	0.16 per kWh	5552 kWh	£888

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.

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: 8.6 Tier 2: 2.2	20
Medium biomass	Solid biomass: Municipal solid waste (inc CHP)	200 kWth and above, less than 100 kWth	Tier 1: 5.0 Tier 2: 2.1	20
Large biomass	Solid biomass: Municipal solid waste (inc CHP)	1000 kWth and above	2.0	20
Small ground source	Ground source heat pumps, water-source heat pumps, deep geothermal	Less than 100 kWth	Tier 1: 8.7 Tier 2: 2.6	20
Large ground source	Ground source heat pumps, water-source heat pumps, deep geothermal	100 kWth and above	Tier 1: 8.7 Tier 2: 2.6	20
Solar thermal	Solar thermal	Less than 200 kWth	10	20
A2W heat pumps	ASHPs	All	2.5	20

(Source: OFGEM)

Green Deal cashback levels

Technology	Cashback value (£)
Solid wall insulation	£4000
Cavity wall insulation	£250
Loft insulation	£150
Condensing gas boiler	£270
Condensing oil boiler	£310
Double glazing	£650
Heating controls	£100

A full list and further details can be found onine at http://bit.ly/PPlkXv

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Turning water into wealth

TGE Group has completed a project using the residual heat from a lake to provide heating for a Shropshire poultry farm

Utilising a water source heat pump, the system has been designed to reduce energy costs by a third whilst also substantially reducing carbon emissions.

Poultry farmer, Steve Dixon of SA & DE Dixon Ltd, contacted TGE Group concerned about the business' escalating energy bills. On the back of a technical site survey, TGE Group identified a lake near the rearing sheds which could provide the necessary heat for a water source heat pump.

TGE Group designed and manufactured a bespoke fan coil heater to work with the low temperatures required for heat pumps.

As well as a 33 percent reduced energy bill, the installation is eligible for the commercial RHI which helped generate a 22 percent return on investment with a five year payback. Over the 20 year RHI contract it's projected that the farm will save £1million in income and savings as well as a reduction in carbon emissions by 19 tonnes per year.

Steve Dixon said: "We have a high heat demand due to the continuous rearing cycle, and the cost of running our old LPG heating system was beginning to spiral out of control. The system they installed was innovative and allowed us to take advantage of the natural resources available on the farm."

Matthew Evans, heat director at TGE Group, added: "Water source heat pumps are a great way of providing space and water heating and can be adapted to a range of bodies of water such as canals, lakes, rivers and streams. Steve Dixon's lake proved ideal for the purpose as although the lake is used for commercial angling, we had to ensure the lake temperature is monitored so as not to affect the habitat of the carp."

Liquid gold: SA & DE Dixon of Shropshire is the first poultry farm in the UK to be heated by a water source heat pump

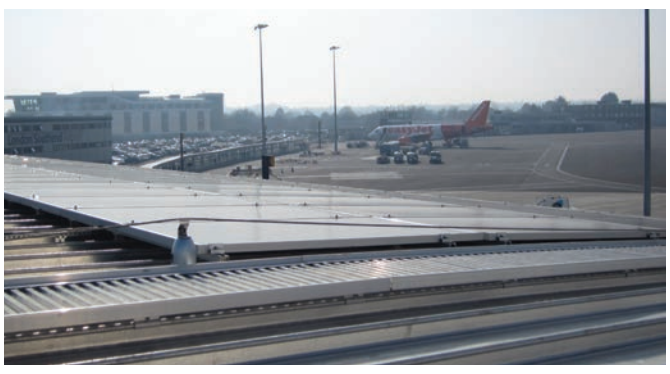
PV spreads it wings

Britain's largest airport solar installation has been completed at **London Southend Airport**, as part of a £10m terminal expansion

496 solar panels now supply the terminal's expanded range of shops, cafes and restaurants with clean solar electricity via the airport's private electricity network. The airport became Europe's fastest growing last year, recently passing the one million passenger barrier.

The new solar system was installed by Reading-based Photon Energy on the terminal's curved tunnel-shaped roofs, with panels supplied by Conergy.

The panels are expected to help the terminal achieve a BREEAM Very Good environmental assessment rating, and to negate around 1,000 tonnes of carbon dioxide emissions over the next twenty years.



David Lister, London Southend Airport operations director, said: "We are delighted to add the provision of clean solar electricity to a range of green initiatives we've introduced as the terminal has developed. Environmentally-friendly initiatives are very important to us and the whole building has been designed to incorporate a number of them, including sustainable drainage, specialist coating to improve insulation, extensive glazing to enhance natural lighting and slow start escalators."

Robert Goss, md of Conergy UK & Ireland, added: "The recent flooding and heavy rain are a reminder of why the buildings we put up today should consider the climate of tomorrow and produce as much zero-carbon energy as possible. The British solar industry can easily turn otherwise unused rooftops into mini-power stations, reducing demand on the grid and the need to import and burn coal or gas. Public and private sector organisations across the country should look at London Southend Airport and work out how they too can produce and consume their own clean electricity."

Taking flight: London Southend Airport is helping to clean the image of modern aviation with the UK's largest airport PV installation

SAFETY EQUIPMENT

What: Ideal Solar Energy uses platforms instead of scaffolding for fitting PV roof systems

How: Easi-Dec Solar Access System

Result: £270 saving per property

Ideal Solar Energy has bought over £50,000 worth of Easi-Dec's Solar Access Systems to fit and service its solar panel orders.

As the system can be assembled and dismantled in 30 minutes, the company says its installers are able to arrive on site, install the system, complete the maintenance job and leave the property on a tighter schedule.

Ideal Solar Energy calculates that once its Easi-Dec systems have been used on 2000 projects it will have made a saving of £277,000.

The Solar Access System comprises two telescopic Decs and a Catwalk which will provide an 8m or 10m long working platform. Further Decs and Catwalks can be added to provide a modular system. The system also includes a rolling window bar, strap operated legs and a hoist for lifting solar panels to roof level.

According to Easi-Dec, the Solar Access System does not require any tools for assembly, making it quick and simple to construct. The Solar Access System can be transported in either a transit type van or on a roof rack.

"We looked around at the various options before settling on the Easi-Dec system," said Pete Daley, operations director at Ideal Solar Energy.

"A key factor in us opting for this product was that Easi-Dec was able to demonstrate the Solar Access System on site, allowing our team to understand how to use it. For the first days of Ideal Solar Energy using these systems, we had an Easi-Dec sales engineer on site and he ensured we were working with the system correctly and ironed out any problems we were having."

Tall order: The Solar Access System saves PV installers time and money compared to traditional scaffolding, says manufacturer Easi-Dec

HEAT PUMPS

What: North Lincolnshire community pavilion utilises sustainable energy

How: Two Danfoss 26kW DHP-R GSHPs

Result: Space heating and hot water for 16 showers plus 50 percent heating bill reduction

Pure Renewables has installed two GSHPs at Winterton's newly built community sports club in North Lincolnshire.

The heat pumps have an output of 26kW and supply space heating to the 576m^2 sports pavilion via an underfloor heating system, as well as supplying a 1000 litre hot water tank for 16 showers. 2km of ground loop were installed horizontally beneath the club's football pitches.

The new community pavilion was officially opened by Graham Taylor, ex-England manager, at a special event held last October. During the event, installation company Pure Renewables had the opportunity to demonstrate the heat pumps to local residents and businesses, highlighting the benefits of heat pump technology for both commercial and domestic applications.

Councillor Don Johnson at Winterton Town Council said: "As a community organisation it's vital for us to find sustainable and cost-effective ways to operate so that we can continue to deliver our service to the community. We were aware of the expense involved with connecting the building up to the gas grid, so instead we decided to make use of the large amounts of the land we have onsite to provide sufficient heating and hot water to the sports club via two ground source heat pumps."

Chris Dale, director of Danfoss, added: "We are seeing increasing demand from businesses who are looking for new ways to reduce their carbon emissions and keep their overheads to a minimum. It is fantastic to see the local community of Winterton benefitting from a valuable new facility which will be able to continue delivering its services for years to come thanks, in part, to the ground source heat pumps."

Going to ground: Winterton's new community sports pavilion draws its heat from ground loops laid beneath the village's football pitches

My working week

Who: Tim Pollard, Plumb and Part Center's head of sustainability.

What: Plumb Center is one of the UK's leading suppliers of plumbing and heating products including central heating systems, bathrooms and showers, drainage and renewable technologies. Plumb and Parts Center has more than 500 branches UK-wide.

Man about town: Tim Pollard spends a lot of time at Westminster talking to politicians from all sides of the house

Behind that bowtie

Early bird

It's the early bird that catches the juicy morsel and if I'm in the office I like to be at my desk just after 7am. I'm also a dedicated tweeter, so I also like to devote at least 15 minutes to Twitter before 8am. It's a fantastic source of information for people who haven't the time to trawl newspapers and websites. It's so easy to click or post a link, enabling you to keep informed and even break the news, because Twitter is always first.

Spice of life

It's fair to say no working week is the same, and I wouldn't have it any other way – it's the variety of my job that makes it such a joy. I might be 60 but retirement couldn't be further from my thoughts.

I'm based at the Sustainable Building Center (SBC) in Leamington and we're really seeing traffic returning in a big way, which bodes well for a sustained economic revival. The SBC is a fantastic resource, perfect for training and also the ideal venue to talk to installers, politicians and business leaders about our rapidly changing industry.

We welcome a very diverse group of people, including all the major developers, house builders, social landlords and retail groups. Anyone who wants to run their buildings in a more efficient and cost effective way.

Day job

I spend a lot of my time writing, working on presentations, or responding to the news agenda of the day – these days it's vital you react quickly, the news agenda won't wait for you.

I also try to build in some thinking time. The demand to contribute to think tanks, forums and consultations is constant; it can be a challenge to keep pace. I also like to keep on top of developments by reading reports and keeping a diary of important upcoming dates. If I'm not in Leamington I might well be on my way to London to meet with DECC, OFGEM, MPs or to attend an event.

Talking to politicians isn't always easy, but we're abjectly non-political and we're delighted to help anyone who is going to promote sustainability and the products and servicing we offer, regardless of which party they represent.

Staying balanced

My days in London can be a very long, especially if I have an evening event, but if I'm in Leamington, I have a strict rule: I don't mind how early I start, but I leave on time to get home and see my wife, that's vital for my sanity.

A few years ago we bought the home which is the keeper. We've probably spend far too much money on it but I don't regret it for a moment.

We're trying to get it into shape to reflect my interests – PV installation, sophisticated heating controls, a smart meter and water efficient shower heads. I'm also hoping to install a heat pump.

We're very keen gardeners and live outside in the summer. And love our Saturday morning strolls into Leamington for a bite to eat and perhaps the odd tipple.

The future

I don't plan for the future. I've met a lot of successful people who have their life plans all mapped out, but I've really never done that. All I can say is that I love my job, and as any salesman will tell you, it's easy when you believe in the products you sell.

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- Solar panel loans
- Wind turbine finance
- Installation finance
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Renewable Energy Finance for Your Clients

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- No Charges against Land or Property - Decisions in 3 hours - Fixed Monthly payments
- Payments are 100% Tax deductible - We can pay stage payments
- We finance all commercial projects from £15,000 to £1 Million +

* On selected products.

100% tax deductible*

Decision within 3 hours

Stage payments available

98% acceptance rate

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Our customers rate this excellent service 100%

ncfplc.co.uk is ranked 9.7 out of 10.
Based on 2,851 user reviews.

NATIONWIDE
CORPORATE FINANCE LTD

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