

Oil installer

News and views from an evolving heating world



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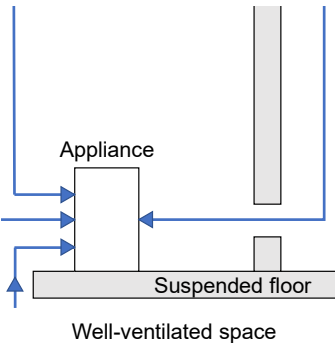
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Decision time for the future of heating

Welcome to the latest issue of *Oil Installer*. As we head into the autumn it's the perfect time to think about what the heating seasons of the future will look like, particularly for the rural homes our industry mainly serves. Will it be much as now, with most households using boilers and topping up their tanks in the summer – but with a biofuel like HVO rather than kerosene? Will it be as we expect the government to set out in its forthcoming Heat and Buildings Strategy, with most rural homes using electric heating via a heat pump? Or, perhaps, a mix of the two?

That's a question that we as an industry will be trying to answer as part of the expected consultation. To say this is a critical moment, not just for our industry but for many rural households, is an understatement, and I would encourage anyone who has a view to respond.

It goes without saying that at OFTEC we are totally committed to supporting the drive to net zero. However, we live in the real world, understand the challenges of off-gas rural homes and we haven't seen a magic money tree yet (although we're still looking!). Consequently, we anticipate a crucial role for both solutions – heat pumps and biofuels – and think that policy flexibility will be crucial for achieving a successful transition that is fair and affordable.

Our work to demonstrate the viability of HVO has already taken us a long way. We now need to finish the job and get liquid fuels fully supported in government decarbonisation policy. We are confident we can address any questions over supply and sustainability. We have strong plans to ensure that conversion of homes to HVO goes smoothly and, with an experienced workforce and robust fuel supply infrastructure, we already have the boots on the ground to deliver the solution.

Paul Rose

CEO
OFTEC

Support HVO and help secure the future

We've received an excellent response so far to our consumer information campaign which launched at the end of May to spread the word about a new fossil free, renewable fuel to replace kerosene – but we still need your help to achieve our goal!

'Future Ready Fuel', aims to tell oil heating customers they don't need to switch to expensive methods to install green heating technologies to reduce emissions from their homes – they could simply swap to a new low carbon liquid fuel instead.

Called Hydrotreated Vegetable Oil (HVO), the new fuel is made from sustainably certified waste fats and oils and cuts carbon emissions by almost 90%.

HVO is currently being trialled in properties across the UK and the results are successfully showing that the new fuel offers the affordable, easy-to-install solution oil-heated households need as we work towards a net zero future.

But there is still work to do before HVO can become widely available. Turn to page 14 to find out how you can support OFTEC and UKIFDA's Future Ready Fuel campaign and secure a bright future for the liquid fuel heating industry.

The OFTEC team continues to grow

It's been a busy few months at OFTEC and we've been investing in our team to further strengthen the services we provide to our technicians and members.



Toma Stakutyte

We're pleased to welcome Toma Stakutyte as a compliance officer in our registrations department. Toma will be working closely with our inspections team to support technicians and ensure compliance with industry standards to maintain the high level of service consumers expect from OFTEC.

We've also recruited a new registration services administrator. Grace Scarff takes on the role and will support technicians across our full suite of registrations from liquid and solid fuel to renewable technologies.



Grace Scarff

These appointments are part of OFTEC's long-term commitment to our technicians as we continue to enhance the support and services we provide across the off-grid heating sector.

We're at an important crossroads for the future of UK heating as government focuses on achieving its 2050 carbon reduction targets.

As we work to deliver a renewable liquid fuel for oil-heated households, it is imperative we maintain the highest professional and technical standards. This will enable us to best support

both our technicians and their customers as we transition to this new low carbon future.

New heat pump training and assessment scheme on the way

A new range of training and assessments for heat pump installers and technicians is in preparation to support OFTEC's expanding renewable registration offering.

Current government proposals to meet the UK's net zero target by 2050 suggest that some 600,000 heat pumps will need to be installed in homes per year by 2028. This will require the skills of around 30,000 Microgeneration Certification Scheme (MCS) accredited businesses – a substantial increase on the 1,000 professionals currently registered.

To help off-grid heating technicians make the most of this potential business opportunity, a new OFTEC-led working group has been set up to design and implement a series of training assessments for air source and ground source heat pumps.

The group is made up of industry experts including manufacturers, certification bodies, training centres and technicians who are pooling their knowledge to create the new offering which is based around four key modules:

- Core
- Design
- Air Source Heat Pump (ASHP) installation
- Ground Source Heat Pump (GSHP) installation

OFTEC training manager David Knipe explains: "The group agreed that combining both air source and ground source heat pump design and installation together could cause issues for candidates who only wish to concentrate on one type of heat pump. By offering a modular, tailored approach we can ensure technicians are not expected to cover areas that won't be applicable to their work.

"Our initial focus is on developing a set of competence criteria in partnership with MCS that will enable the course materials to be produced."

The assessments will involve a mixture of theory questions and worksheets with an emphasis on practical demonstrations of installation and commissioning skills in a controlled workshop environment. Separate, impartial training will be offered ahead of the process.

Re-certification will be required every five years, providing confidence that both technical and regulatory changes have been understood and adopted by certified persons.

The final step will be to gain United Kingdom Accreditation Service (UKAS) approval that all ISO17024 requirements have been met. Further progress updates will be included in the next issue of Oil Installer.

New MCS standards

MCS 040: Planned & preventative maintenance of biomass appliances – requirements for maintenance engineers carrying out maintenance activities.

To improve air quality, the UK Government intends to introduce a requirement for owners of biomass boilers in receipt of the RHI to carry out annual preventative maintenance checks.

MGD 007: Heat Pump Reference Information & Tools.

This document combines the following guidance documents and lookup tables:

- Domestic Hot Water Cylinder Selection Guide
- GSHP Hydraulics Design Guide
- Heat Emitter Guide for Domestic Heat Pumps
- Met Office Mean Monthly and Annual External Air Temperatures
- Values of Thermal Conductivity
- Group Loop Sizing Tables.

Use this QR code for more details.



New UK Heat and Buildings Strategy expected soon

New oil boilers could be banned from 2028, as part of plans to decarbonise the UK's buildings, expected to be published very soon. This is just one of a number of eye-catching features that could be announced.

The long-awaited Heat and Buildings Strategy is expected to set out ambitious and – at times controversial – policy proposals designed to phase out the use of fossil fuels and dramatically speed up the deployment of energy efficiency measures and low carbon heating systems – all with the aim of achieving net zero by the 2050 target.

Off gas grid homes are certain to be identified as a key priority. The Government believes it will be a leading sector for the roll out of heat pumps during the 2020s and, with new build, critical to achieve the goal of installing 600,000 heat pumps a year by 2028.

New consumer support programmes and other measures to be announced in the Strategy will support this goal. However, a potential role for renewable liquid fuels may also be recognised and all elements of the plan will be subject to a consultation process.

OFTEC and UKIFDA will review the plans carefully, amid concern about the high costs and disruption many consumers could face if electrification is pursued too aggressively, which could be avoided if a positive role for biofuels such as HVO is also announced.

Paul Rose, OFTEC CEO, commented "We fully accept that fossil fuels have had their day and we are hopeful that government will recognise a role for biofuels in decarbonising off-grid homes. We will respond positively to

the consultation once it's published and our evidence will show how HVO can get the job done more quickly, and at much lower cost, than converting oil-heated homes to heat pumps."

Ken Cronin, UKIFDA CEO, agreed, stating "Through our Future Ready Fuels consumer information campaign and the work done by distributors, we know there is huge support and demand for HVO – a solution our industry is ready and waiting to deliver."

Read more detailed analysis about what we expect to see in the Heat and Buildings Strategy on page 12 and find out how you can contribute to the consultation.

You can also get involved with the Future Ready Fuels campaign – discover more on pages 14 and 15.

Don't forget to activate your new OFTEC website account!

We hope many of you will have already discovered the new, improved OFTEC website and technician hub, which launched at the end of June.

The new site at www.oftec.org offers all OFTEC's services including registration account functions, scheme information and applications, technical book updates, the works notification system and OFTEC Direct, all in one place, making everything simpler to use.

Trade association members can also access a dedicated, password protected area providing details of the work of OFTEC committees, opportunities to comment on industry consultations and other useful features.

At the time of launch, you should have received a personal email invitation to create a new, unique user account which, when activated, allows full access to the simple to navigate site.



If you missed the email, watch out for the reminder, you will soon receive with all the instructions on how to do this. It's important to remember that login details for the old OFTEC website will no longer work with the new site so don't forget to activate!

The upgraded site merges the former joinoftec.com, oftecdirect.com, oftec.org and ofteconline.com, and includes all the functions previously available with a few new additions:

- Compliance certificates can now be sent directly to customers by simply

adding their email address to the site, saving time, money and paper.

- In the OFTEC Direct shop, you will only see products applicable to your own scopes of registration, so you no longer have to scroll through many items to find the right one.
- OFTEC inspectors now use a bespoke app so you will receive inspection reports by email.

All application forms for new scopes of oil and renewable heating registrations, and to 'add a technician', are now included in the Technician's hub rather than being spread across two separate sites. The portal also includes all scheme and training information.

The new look website has been designed to help reduce your administration time and provide a more efficient, effective experience. OFTEC plans to introduce more online services over the coming months so watch this space for more information.

Reducing paper waste one certificate at a time

At OFTEC we're keen to play our part in reducing our environmental impact, not just by promoting renewable liquid fuels but by the way we operate day to day. As part of this green commitment, our work notification certificates are going paperless. Here's what you need to know...

Every year we send out up to 50,000 paper certificates to confirm that installation work undertaken by technicians complies with the appropriate building regulations.

That's a lot of paper, which is why we're now offering a digital alternative. To support this positive environmental change, all technicians have to do is include an email address for their customer on the portal and the work notification will be sent out digitally. For customers who do not wish to share their email address, paper versions will still be distributed.

As well as reducing paper waste, it also makes it easier for customers to retain their certificate instead of it being lost in a draw of paperwork. Increasingly, solicitors are asking for these documents when selling a property and we've spoken to many homeowners who've had their house move held up after losing their copy.

We hope technicians will support this initiative and help us deliver a more modern, secure process for managing work notifications.

We've also undertaken additional steps to reduce our overall environmental impact. Our inspections teams are no longer using paper reports. These have also now been digitised, while this year's OFTEC conference and AGM, which typically racks up a lot of miles on the road, is being held virtually, which will significantly reduce vehicle emissions.

This is just the start and there is of course always more we can do. We'll continue to identify and invest in new opportunities to minimise our impact on the environment and will report on these over the coming months.

A positive year for MCS registration

As an approved certification body for CPS and MCS, we are pleased to work with technicians and help them on their journey to installing renewable technologies.

We've had a great start to 2021 with high levels of interest in our heat pump, biomass and solar thermal registrations. This was boosted by the heat pump webinars we ran in partnership with MCS to provide practical, hands-on guidance on the process for securing appropriate registration.

Since the start of the year, we've seen more than 20 businesses across the UK get on board or renew their registration.

Times are changing as the Government ramps up its commitment to net zero emissions. We understand how important it is that we all look to the future and work to fully equip technicians with the skills they require to support customers across a diverse range of home heating technologies.

Renewable technologies such as heat pumps are, and will be, a part of this equation for some consumers with suitable properties, and they will need trusted technicians to guide them through the process.

But we also know the challenges thousands of oil heated homes will face when it comes to decarbonising heat from their homes. This is why we firmly see renewable liquid fuels as a key part of the solution.

A mix of technologies can comfortably co-exist and OFTEC technicians with a range of registrations are in the perfect position to advise and support customers on the best way for them to go green.

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Hydrotreated Vegetable Oil (HVO) has the potential to significantly reduce carbon emissions from oil heating systems. Graham Barker of Riello considers the key issues.

HVO – the future for oil heating?

Oil fired heating represents a relatively small percentage of the UK heating market, accounting for approximately 1.5 million households, compared to around 22 million using gas fired central heating. As a result, the oil boiler market is seen by government as an easy candidate for electrification in the transition to net zero carbon.

However, as has been noted several times in Oil Installer, many properties that use oil fired appliances have low Energy Performance Certificate (EPC) ratings and are not suitable for heat pumps without massive investment in thermal insulation. Consequently, alternative options need to be seriously considered and one such option is HVO.

Renewable heating liquids

The oil industry, in conjunction with OFTEC, has been developing 'renewable heating liquids' to replace heating oil derived from fossil fuels, such as kerosene and gas oil. Various options have been assessed, including blended bio liquids sourced from virgin feedstock such as rape and palm seed, through to fully renewable liquid fuels derived from certified waste fats and used cooking oils (UCO), such as HVO.



Hybrid settings

It may also be possible to set a burner operating on kerosene to the required HVO settings prior to the introduction of

Initial studies focused on a percentage blend FAME (Fatty Acid Methyl Ester) bio liquid but this failed to provide the required carbon reductions. For the highest level of carbon reductions, we need to look at switching to a 100% renewable fuel source rather than a percentage blend, at a low cost to the householder.

HVO provides this solution as it is a near 'drop-in' replacement for kerosene in residential heating systems, and a full 'drop-in' for gas-oil for, generally, commercial & industrial heating equipment.

When switching from kerosene, fuel pump pressure has to be increased to provide improved atomisation of the fuel to accommodate the higher flash point of HVO (approximately 78°C compared to 38°C for kerosene).

Oil nozzle outputs must also be re-calculated due to differences in viscosity and density of HVO when compared to kerosene. The increased operating pressure of the oil pump must also be factored into the nozzle size and burner air settings may require some minor adjustment.

the fuel – making switch-over easier. Extensive R&D at Riello means we are able to offer our OEM customers full HVO test data to ensure current equipment is fully HVO ready.

The cost of upgrading a current oil boiler to HVO is estimated at around £500, far less than conversion to heat pump technology and likely to form part of a service visit.

HVO is non-toxic, non-carcinogenic, biodegradable, has no smell and is much safer to store compared to current fossil fuels. The condensate produced from the combustion of HVO is almost pH neutral, making it over 90% less acidic than kerosene and gas-oil condensate. A switch to 100% HVO provides an estimated 88% reduction in carbon, compared to current fossil fuels.

Crucially, HVO has also received ISCC certification (International Sustainability Carbon Certificate) to verify it as a sustainable fuel produced from waste liquids that does not contribute to de-forestation. There are also studies under way to develop HVO processing from wider range of waste streams, including municipal waste.

As the take up of heat pumps increases, the use of renewable liquid fuels such as HVO will provide initial carbon reductions necessary for government targets whilst also minimising costs to householders. Potentially, therefore, HVO will make the switch to renewables

easier and more affordable for the off-grid sector – an important consideration as government financial support for switching is likely to be reduced following the expense of the Covid-19 pandemic.

Also, it has been suggested that the high cost of upgrading the electrical network will make 600,000 – 1,000,000 homes unsuitable for heat pumps. Some homes may adopt a hybrid system mixing a back up boiler (ideally running on HVO) with low carbon heat sources.

HVO production

Global forecasts show large increases in the production of HVO over the next five years with, potentially, current global production of approximately 7MT per annum increasing to approximately 30MT per annum by 2025. This will more than suffice for the UK demand. A phased switch over, over an expected 15-year period, will ease pressure on the supply chain.

Ultimately, government policy has to be technology-neutral and consider a combination of options to avoid penalising householders in 'hard to heat' homes. Thus, it's clear that adopting a switch to HVO will greatly assist government in achieving its 2050 net zero targets.

Addressing cost

In a recent OFTEC study of 1,000 rural properties, 75% of respondents said they would be unlikely to install a heat pump, even with government financial incentives. A major factor is the disruption of improving the thermal insulation of the building fabric to make a heat pump feasible. Clearly, then, government has to provide affordable and practical solutions.

At present HVO is classified as road fuel with tax and duty applied accordingly, making it more expensive than kerosene. The Government needs to mitigate this by classifying HVO as a residential heating fuel, reduce taxation and duty and/or provide grants to fuel suppliers to reduce the upstream cost.

At the time of writing, we await publication of the Government's 'Heat In Buildings Strategy', which is likely to force a change to electrification of home heating via heat pumps and potentially include a ban on oil boiler sales within the coming years. The oil industry is hopeful that the report will include an option for renewable liquid fuels such as HVO.

www.rielloburners.co.uk

Recognising innovation

Cornwall-based liquid fuel distributor, Mitchell & Webber has won the UK and Ireland Fuel Distributors Association (UKIFDA) Innovation Award for being at the forefront of the sector's Future Fuels campaign and for making a real difference in the industry's drive to make renewable liquid fuel a viable alternative to heating oil for off-gas grid properties.

Sponsored by industry trade magazine, Fuel Oil News, UKIFDA launched the Innovation Award in 2021 to find and commend the one thing that makes the industry stand out.

"Our Innovation Award is for the person or company that has made the most significant, innovative, and positive contribution to our industry over the past year," said Ken Cronin, UKIFDA chief executive.

"It really is incredible and so impressive to witness all that Mitchell & Webber has achieved during the past 12 months. They have been at the forefront of driving our Future Fuels campaign and not only converted a number of homes to HVO in Cornwall, but also a church and a school, highlighting the promising potential of this renewable liquid fuel to replace oil heating in properties and homes currently reliant on fossil fuel." See page 14 (Feature – 'Support Our Drive')

Involved since the start with the drive to a renewable fuel alternative, Mitchell & Webber understands that this is one of the most important matters for the future of the liquid fuel distribution industry. Director, John Weedon commented: "We are so happy to have won the Innovation Award – it means a great deal to us and it's fantastic to have our determination and hard work recognised.

"We're delighted to be the first fuel distributor in the UK to have started the HVO trials in homes. When the idea was first raised, we moved heaven and earth to ensure that we could not only be involved, but were able to lead the way and really prove the potential of HVO as an eco-friendly alternative to heating oil.

"Our aim was to show the extent of how useful HVO could be in the bid to achieve net zero and so we tested a wide range of appliances, including AGAs, old boilers, low NOx boilers and Rayburns, to check the renewable fuel works with all of them – and it does."

Robert Weedon added: "Winning the Innovation Award has topped off an already brilliant year for us and our industry and we're so pleased that Cornwall is leading the way with HVO."

www.ukifda.org



Worthy winners, John and Robert Weedon of Mitchell & Webber

New sales support role for Grant

Grant UK has created a new role within its sales team to further increase the level of technical sales support offered to customers. Shaun McCarthy has joined Grant in the new position of sales support engineer, providing onsite product support for all of the company's renewable heating technologies.

Shaun started at the beginning of May and has been working closely with installers to help them transition into the renewables sector, providing external technical support out in the field.

He will be supporting Grant's area sales managers and renewable business development managers with technical assistance for air source heat pump installations. This includes attending site to provide pre-installation technical support, such as site surveys, system design support and heat loss calculations, and post-installation support, such as helping with set-up and commissioning and assisting installers with the system handover. Shaun will also be providing onsite product training, helping installers and merchants to develop their



Grant UK's new sales support engineer, Shaun McCarthy

knowledge of renewable heating systems so that they can confidently grow their own businesses into the renewables market.

A heating engineer for over thirty

years, Shaun has been involved with renewable technologies for more than half that time. Throughout his career, he has been an installation and commissioning engineer, as well as carrying out product maintenance with repairs and servicing. In his various roles, Shaun has provided technical training and sales support for different systems and more recently, has specialised in heat pumps and renewable technologies.

"I enjoy how no two days are the same when you are working with renewables," comments Shaun. "These technologies are constantly evolving to meet the changing needs of homeowners and their installers, so we are always learning about how to develop and achieve the most efficient and sustainable heating system. I am passionate about understanding an appliance and its system, helping installers to ensure a system is performing to its optimum capabilities. I am looking forward to working with Grant's customers and helping them with the technical product support they need out in the field."

www.grantuk.com

UKIFDA donation helps tackle fuel poverty

The UK and Ireland Fuel Distributors Association (UKIFDA) has donated £2,000 to National Energy Action (NEA) from the proceeds of this year's UKIFDA EXPO and Future Fuels conference, which was held on 7-8 July as a virtual event.

"We were delighted to donate £2,000 to NEA from the profits of our UKIFDA EXPO 2021," says Ken Cronin, UKIFDA chief executive. NEA is the national charity working to end fuel poverty in England, Wales and Northern Ireland. The pandemic has had a major health impact and there is a genuine fear that we'll see the financial impact of this during the next few years – which undoubtedly will hit the poorest in society most.

"With over 1.7m homes across the UK using liquid fuels to heat their home, as an industry that distributes fuel to people's homes, it feels only right to play our part. As a long-standing supporter of NEA, we couldn't be happier to be supporting the fantastic work NEA does to tackle fuel poverty."

In the UK, there are approximately four million households that are fuel poor, which means they can't afford to live in a warm, dry home. NEA works to end fuel poverty and campaigns for greater investment in energy efficiency to support households struggling to pay their home heating bills.

Adam Scorer, chief executive of NEA commented: "NEA wishes to thank UKIFDA for its kind donation to the charity. More than one in ten UK households are unable to keep their home warm and safe, and around 10,000 people die each year because of illness caused or worsened by living in a cold home. This donation will allow us to continue our vital work to support low income and vulnerable households in fuel poverty across the UK."

"At the heart of this year's UKIFDA EXPO event was Future Fuels and the investment our industry is making in renewable liquid fuels and the issues linked with it," added Ken. "Next generation renewable



Ken Cronin UKIFDA chief executive

fuels are helping the UK and Irish Governments achieve their Net Zero targets and the transition to low carbon fuels – in a way that is affordable for rural households.

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Heat in Buildings Strategy – make your voice heard!

A ban on the installation of fossil fuel oil boilers could be one element of a wide range of policy ideas to drive forward the decarbonisation of the UK's homes, says Malcolm Farrow, OFTEC's head of public affairs.

The long-awaited UK Heat and Buildings Strategy is expected in the next few weeks, along with consultations which offer a vital opportunity for all concerned to comment on the Government's proposals.

A key focus will be the deployment at scale of heat pumps, and the new strategy is certain to contain policy measures designed to drive up installations from around 30,000 a year currently to 600,000 a year by 2028.

The Government and its advisors, the Climate Change Committee, acknowledge that this level of growth is ambitious and challenging, but they claim it is necessary if the net zero by 2050 emission target is to be achieved.

While there is an urgent need to make progress with electrification to fulfil this target, the Government accepts there will also be a role for other technologies. One consultation will be on how hydrogen could play a part in the transition. There are also expected to be important questions about biofuels, and the extent to which they can contribute to emission reduction in heating. This will come as welcome confirmation that the Government understands that for some homes, heat pumps are not an ideal solution.

OFTEC and UKIFDA will respond constructively, presenting evidence that HVO offers a tried and tested solution that will be popular as well as practical.

So, what will the new Strategy tell us about the Government's approach? We already know that they have learnt a lot from past failures. The old RHI model of paying households after they have installed a low carbon heating system will be gone, replaced by a new Clean Heat Grant that helps support the upfront cost of heat pump installations. However, even with this financial support, heat pumps will still cost more than a straightforward boiler replacement, putting the technologies well beyond

the reach of many households, particularly those on low incomes.

To overcome this, the Government will also introduce a Home Upgrade Grant (HUG) in England with £150m of initial funding pledged for off-gas grid low-income households. A prominent feature of HUG is that the scheme supports deep retrofits with high average costs of £10,000 to £25,000 per home expected, depending upon the starting EPC rating of the property and fuel type.

The programme is part of a £2.5bn Conservative manifesto commitment to provide energy efficiency upgrades and low-carbon heating to low-income households living off the gas grid in England to tackle fuel poverty and meet net zero.

The two schemes will go some way towards making heat pumps mainstream. However, they will tend to support those at either end of the wealth spectrum, with households on middle incomes missing out. It's also likely that local authorities delivering the HUG scheme will focus on the easiest wins, targeting urban flats with storage heaters, rather than hard to treat rural homes.

Alongside grant support, the

Government is expected to announce two other approaches to drive the transition: regulation and what are being referred to as 'market mechanisms'. Both approaches are designed to tackle some of the perceived barriers that currently make heat pumps unattractive.

The most headline-catching regulatory proposal would be an end date for the installation of fossil fuel oil boilers, which could come as soon as 2028, and gas boilers in the 2030s. While this might seem like bad news for the traditional heating industries, the potential to fit boilers converted to run HVO could offer a welcome alternative, enabling the liquid fuel sector to contribute to the transition. There is also expected to be strong support for hybrid solutions, which has pros and cons.

Other elements of the strategy should focus on improving energy efficiency. This is one area where market mechanisms can play a leading role, with private finance – including green mortgages and loans – seen as a way to encourage consumers to make energy efficiency improvements to their homes. However, until the new strategy is actually published, all we can do is speculate.

Make your views known!

Driving through changes on this scale will have profound consequences for many households, and for our industry. Many of these ideas will be expensive or disruptive to implement and could become very unpopular with voters unless they are perceived to be fair. This may in part explain why it is taking so long for the Government to publish its plans.

As a reader of Oil Installer, you will have a unique insight into how practical the proposals are, and whether your customers are likely to accept them. At this crucial moment for the future of heating, it is vital that as many people as possible respond to the consultations.

To help you, OFTEC will identify the key consultation questions that affect the off-gas grid sector and write summaries of the issues you may wish to consider and include in your own response. Look out for announcements from OFTEC once the strategy is published for how to access this information.

Make your voice count – don't miss this chance to have your say on the future of heating.



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All new Grant Vortex oil-fired boilers are HVO compatible.* Hydrotreated Vegetable Oil (HVO) can be a 'drop-in fuel' so it is a suitable replacement for existing fossil fuels, providing a 100% biofuel option. Significantly lowering carbon emissions of home heating systems, HVO has a part to play in the transition to Net Zero.



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Support our drive to deliver HVO for oil heated homes

In the last issue of Oil Installer, we introduced a new communication campaign to tell oil heating customers about the benefits of a new renewable liquid fuel called HVO (Hydrotreated Vegetable Oil) which can cut carbon emissions from homes by almost 90%.

A joint OFTEC and UKIFDA initiative, 'Future Ready Fuel' has got off to a flying start. The new information website www.futurereadyfuel.info received over 7,000 visits within the first six weeks of the campaign, while over 2,000 consumers have signed up to receive updates on the new fuel, which could be commercially available as soon as next year.

This highly encouraging response has been greatly helped by those OFTEC heating technicians and UKIFDA fuel suppliers who are handing out the Future Ready Fuel flyer at every customer visit. So, if you haven't already done so, please add your support to the campaign and order your FREE leaflets today by emailing marketing@oftec.org.

The Future Ready Fuel Twitter and Facebook accounts are also gaining followers by the day so please do link to these and encourage your customers to do the same so they can pick up the latest HVO news.

You may have also seen Future Ready Fuel adverts appear on your Facebook feed, encouraging more rural households to visit the new website and find out how they can support the drive to make HVO a reality.

Renewable liquid fuels such as HVO offer oil heating customers a simpler, more affordable way to decarbonise their homes – and the route to a secure future for our industry. That's why your help is needed now to spread the word about Future Ready Fuels.

As part of UK wide trials, HVO is already successfully running in over 20 properties up and down the country, with plans to significantly expand the project over the coming months. Read on to find out more.



Mitchell & Webber director, John Weedon; Gwinear Primary School headteacher, Lee Gardiner; George Eustice MP, school governor Cathy Woolcock; and Mitchell & Webber director, Robert Weedon.

Top minister visits Cornish school on HVO

One of the HVO success stories is the first primary school in the UK to switch from heating oil to HVO, attracting a visit from the Secretary of State for Environment, Food and Rural Affairs in the process.

George Eustice MP made the trip to Gwinear Primary School in Cornwall to see the new fossil free fuel, which is made from sustainably certified waste materials, in action.

During the visit, Mr Eustice said: "HVO could be a very important stepping stone on the way to net zero in rural areas like this. There are a lot of people still reliant on oil fired boilers and this is a more environmentally-friendly fuel."

The school is being provided with the new fuel by South West heating oil supplier, Mitchell and Webber.

Gwinear headmaster, Lee Gardiner, added: "Our school is an historic building, so it is extremely difficult to insulate using more modern techniques. Installing a completely new heating system would likely be disruptive to daily school life and could damage such an important structure. So, when I saw the success of HVO conversions in other settings across Cornwall, I knew I had found the perfect option for Gwinear!"

HVO is the answer to a church's prayers

Another more unusual building taking part in the trials is the first church in the country to run on the new fuel, again supplied by Mitchell & Webber.

The installation came about after Stithians Methodist Church put out a call on its local Cornish radio station for ideas to make the building more environmentally friendly. Mitchell & Webber quickly responded and a few



days later, the historic building was using the fossil free fuel.

Dating back to 1865, the church would have proved unsuitable for alternative low carbon heating solutions such as a heat pump without extensive and expensive insulation measures that would ruin the structure and character of the Victorian building.

The Church Committee is delighted with the simple, inexpensive switch to HVO and hopes other places of worship will follow their lead once the fuel becomes more widely available.

Cheers to an HVO future!

In the East of England, a further HVO first is underway as a 300-year-old pub undergoes a conversion to HVO.

The Five Horseshoes Inn in the South Lincolnshire village of Barholm is set in a conservation area and like many other older, rural properties, is energy inefficient.

The building has uninsulated solid walls and solid and suspended timber floors, plus single glazing in most doors and windows. As a result, the pub is expensive to heat and remains cold in the winter.

The transition to HVO has been



The Five Horseshoes Inn in Barholm.

supported by St Neots-based EOGB Energy Products, which has replaced the old 1970s oil fired boiler with an HVO modulating boiler and smart controls. Crown Oil Limited has also provided a new bunded steel oil storage tank.

OFTEC is supplying the pub with HVO and landlady, Emma Freeman is delighted to be taking part in the pioneering trials: "For us, the conversion ticks two boxes. From an energy point of view the place

will be much warmer thanks to a better heating system and improved insulation, and environmentally, we know we are doing our bit to make a difference."

You can do your bit to make a difference too by joining our drive to support the future of the liquid fuel heating industry. Get behind the Future Ready Fuel campaign and help to us deliver an HVO solution for oil heated homes.



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Looking ahead to the next chapter in our industry

Paul Wakefield, managing director at Grant UK, explains why the future of low carbon home heating is one filled with exciting opportunities for installers.

One thing we can be certain of is that tomorrow's heating sector will look different to the one we currently know. The goal of net zero has been set but the path we will follow to achieve these carbon targets is less certain as there are multiple routes available for us to take. Government legislation is being prepared to steer the heating industry into a new era, where traditional fossil fuel systems will need to make way for more sustainable solutions. It is therefore, the responsibility of manufacturers, such as Grant, to support and provide installers with viable low carbon heating products, which can effectively meet their customers' requirements while also reducing emissions.

What we know

Carbon emissions need to be significantly reduced and we must take collective responsibility for this. It is accepted that home heating is a large contributor to carbon levels so addressing our sector is at the forefront of legislation and everyone in the oil industry needs to plan ahead – oil boilers have already been the focus of government legislation and further rulings are expected which could limit their installation numbers. The phasing out of gas and oil boilers from new build properties will commence in 2025 and changes to Part L Building Regulations are also imminent. We have been aware of this for some time now, but we also know that one solution will not fit all scenarios.



Grant oil fired condensing boilers are biofuel compatible

Biofuels

For many oil heating engineers, biofuels are currently at the front of their minds. Trials, headed by OFTEC and supported by Grant UK, are underway exploring the use of sustainable biofuels in home heating systems, including Hydrotreated Vegetable Oil (HVO). HVO is a second-generation biofuel which uses hydrogen, rather than methanol, during its production. It can be a 'drop-in fuel' which allows it to be a replacement for existing fossil fuels, providing a 100% biofuel option.

These trials have produced very promising results with several of our Vortex boilers being successfully converted to run on HVO. Biofuels could therefore help to decarbonise hard to heat homes with minimal disruption and relatively low costs. However, a couple of hurdles may impact the rollout of this sustainable heating option – fuel supply and government support.

Hybrids & renewables

While the place for biofuels in the future of home heating is not yet confirmed, what is certain is that heat pumps will play a prominent role. The rise of air source heat pumps has been noticeable over recent years and sales are only going to grow further. Demand is increasing and this interest will provide the heating sector with exciting opportunities over the coming years. Installers can be part of this growth, developing their expertise to expand their business offering by incorporating air source heat pumps into their portfolio and, in return, they can serve a new, broader customer base.



Paul Wakefield, managing director, Grant UK

Hybrid technologies are another sustainable heating solution that have a part to play in the road to net zero. Air source heat pumps are suitable for many properties, not just new builds, and you only have to speak to our G1 Installers who are regularly fitting Aeronas³ heat pumps to discover the diverse range of projects they have suited. However, in some instances, for example when an old boiler breaks down and a quick replacement is needed, a hybrid product can be the ideal solution to give homes an immediate restoration of heat while also incorporating renewable energy. The VortexAir Hybrid, for example, combines a VortexBlue oil-fired blue flame boiler with a 17kW Aeronas³ heat pump, providing heating engineers with a greener boiler replacement to offer to customers.

Support for installers

The next chapter for home heating is going to be different and while it may appear daunting, there are plenty of opportunities for installers to seize. Product developments and new technologies will make the heating sector an even more interesting one to be a part of. To help heating engineers transition into the renewables sector, Grant UK is providing increased levels of training support and making this as accessible as possible. The Grant eLearning Academy was launched last summer and we have seen over 3,000 heating professionals enroll and start their renewables training. From free, introductory modules through to instructor-led heat pump courses, the eLearning Academy delivers renewable product training in a flexible way to suit installers. This, alongside our Training Academies and expanding technical sales support out in the field, allows Grant UK to provide installers with the tailored support they need to take their own businesses in a new direction. Whatever tomorrow brings, Grant UK is here to help so that no one is left behind as we work together to bring about change for a greener future.

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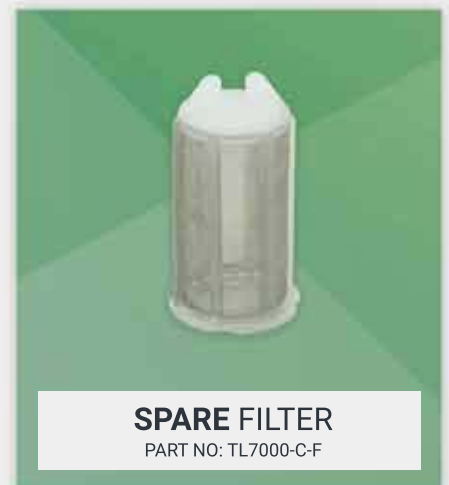
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Draft Heat in Buildings Strategy for Scotland

While much focus is on the forthcoming UK Heat and Buildings Strategy, Scotland, Wales and Northern Ireland all have devolved responsibilities that include some aspects of this work.

Earlier this year, the Scottish Government consulted on its own Draft Heat in Buildings Strategy. The proposals set out ten points of focus to achieve an ambition of zero greenhouse gas emissions by 2045, with interim targets requiring a 75% reduction by 2030, and 90% by 2040 – all faster than the overall UK target.

To meet these interim climate targets and ensure long-term delivery of the net zero objective, around 50% of Scottish homes, or over a million households in total, will need to convert to a zero or low emissions heating system by 2030. This will mean transitioning the vast majority of the 167,000 off-gas homes that currently use oil, LPG, and solid fuels, as well as at least one million homes currently using mains gas.

One controversial aspect of the plan is that zero emissions is defined at point of use – no account is taken of upstream emissions – which favours electric heating, even if generated by fossil fuels.

The use of bio-energy resources is supported where the carbon reduction impact is maximised or where alternative options are not available. The Strategy notes that solid biomass, bio-heating oil and bio-LPG might still have a small role for home heating if displacing fossil fuels in off-gas-grid areas, or where electric heating or heat pumps are unsuitable. A bioenergy plan is promised for 2023 and a working group will be formed to identify appropriate and sustainable uses.

As well as addressing the damaging climate change impact of homes and buildings, the Strategy is also designed to tackle social inequalities in the housing sector, for example unaffordably high energy bills and consequently, fuel poverty.

During 2020, OFTEC contributed to an industry contact group, and it responded constructively to the consultation. However, it pointed out that it is incorrect and misleading to simply dismiss the upstream emissions produced by electricity generation, just because it favours measurement of progress. OFTEC also expressed concern about cost and that Scottish households might withhold support for decarbonisation were they to discover that they were being prevented from choosing cheaper and more convenient low carbon solutions. Instead, it evidenced the positive role biofuels can play and proposed that HVO be supported as a realistic solution for the 129,000 homes currently heated by kerosene.

The Scottish Government will review the consultation responses and issues raised during engagement with stakeholders to inform development of the final version of the Heat in Building Strategy.

Reducing carbon emissions using the best available technology

Martin Cooke, managing director of EOGB talks about the part that the liquid fuels industry has to play in the decarbonisation of the off-gas grid sector.

With the current hot topic of global decarbonisation and the numerous surmising reports from the media on the fate of fossil fuel boilers very much on our minds, here are some potential ways that our industry can play a part in the decarbonisation of the off-gas network sector.

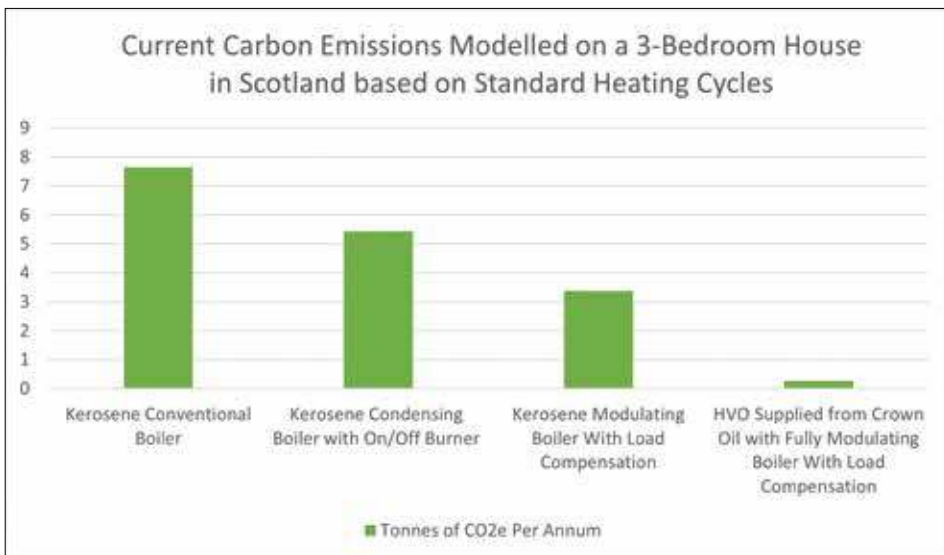
It's well documented that although heat pumps will play a part in the decarbonisation, they can't effectively heat all existing housing stock to the desired level of combined comfort and affordability that a Kerosene fired boiler currently can. Although I am sure this statement will be challenged in due course, we are talking about a possible retrofit installation using existing radiators, and what this means for real-life end user acceptance and affordability.

Looking at current carbon emissions from a Kerosene boiler modelled on a three-bedroom house in Scotland based on standard heating cycles*:

- a Kerosene condensing boiler will emit approximately 7.65 tonnes of CO₂e per annum;
- a Kerosene condensing boiler with on/off burner will emit approximately 5.44 tonnes of CO₂e per annum;
- a Kerosene modulating boiler with fully compensated controls will emit approximately 3.39 tonnes of CO₂e per annum.

So, by merely changing the boiler and controls to the best available technology i.e. a modulating boiler with OpenTherm multi-zone system, there is an instant carbon reduction of 4.26 tonnes of CO₂e per annum. The boiler would then be future-proofed for HVO when it is rolled out en masse.

Current modelled data shows us that this boiler upgrade, which can be simply converted to HVO with some very minor conversion and re-commissioning, offers further carbon emission reductions.



- HVO supplied by Crown Oils on a modulating fully compensating boiler would emit approximately 0.28 tonnes of CO₂e per annum.
- An air source heat pump serving radiators on the same system would emit 2.10 tonnes of CO₂e per annum (based on SAP 10.0), which is more than seven times the level of CO₂e emissions from HVO supplied by Crown Oils.

This is a single step change to the decarbonisation of the liquid fuel sector and with this relatively minor adjustment it is possible to reduce customers' kerosene usage through improved efficiency of the system, which will then offset the initial slightly higher cost of HVO fuel. This is a far more cost-effective route than switching to electrification or biomass boilers. It's also worth noting that approximately 46% of existing kerosene-heated properties are pre-1919** and it would not be possible to improve them for alternative technologies, even if the homeowners desired or could afford it.

It's extremely baffling why these sensible changes are not being proposed by the Government. Who wants to spend thousands of pounds upgrading their property when they are perfectly happy with the system they have? Certainly, they won't want

to have to move out while insulation improvements are taking place.

With many rural off-gas grid homeowners in borderline fuel poverty this message should be broadcast far and wide. They should be warned not to believe the fake news that is currently circulating in the media.

Let's not do this to our customers or the many registered technicians who work hard all year round to ensure that heating systems are performing to their optimum efficiency. We need to protect our industry and be proud to be a part of it.

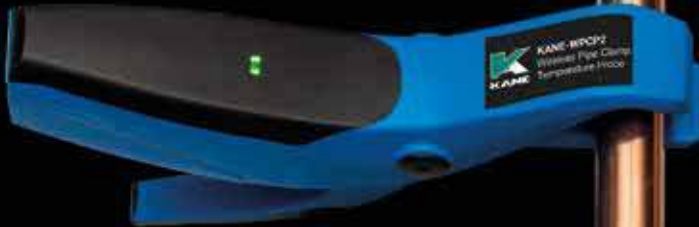
Yes, times are changing, and we all have to do our bit for decarbonisation, but let's be sensible about it.

* In terms of CO₂e emissions the following data was applied:

1. CO₂e emission factor for Generic HVO (GH100) as modelled by BRE @ 0.036 kg CO₂e per kWh
2. CO₂e emission factor for Crown HVO as modelled by BRE @ 0.025 kg CO₂e per kWh
3. all other emission factors as per SAP 10.0

** <https://www.hpmmag.com/renewables/securing-a-net-zero-pathway-for-oil-heating-sector>

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An analyser you can rely on

Jonathan Kane, CEO of KANE Analysers explains why the company's products will meet your needs, regardless of what the future holds...

Oil installers can expect big changes as governments either side of the Irish Sea want to stop using oil for off-gas grid homes and businesses.

Installers also know that the alternatives are a challenge – heat pumps are expensive except for new builds, renewables are weather dependant and HVO fuel is undergoing type approval tests and will require appliances and tanks to be converted.

These aren't showstoppers but they do present challenges and the last thing installers want is to discover that their test equipment is obsolete or irrelevant and have to buy new equipment.

KANE analysers have been used by oil installers for years and we've taken great care to ensure they'll meet your needs today and tomorrow, starting with KANE CARE – our unique after sales service promise or your money back, rated 5 stars on trustpilot.

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But what about tomorrow?

If HVO is adopted, you'll need an analyser that works with the new fuel. Our new KANE258 and KANE358 products meet this requirement and will receive software upgrades to ensure efficiency calculations are accurate when HVO is widely available.

If heat pumps become the norm in new homes, you'll need to test their performance. Our KANE458s and KANE958 products come with KANE



LINK, a unique way to take and see additional measurements so you can test underfloor heating while simultaneously testing the heat pump outside. It also means you can be in two places at once, wirelessly checking hot water temperatures while also testing the boiler downstairs.

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Durability matters

Sean Keleher, Navien's national technical manager discusses the benefits of utilising stainless steel heat exchangers in oil boilers.

According to the Energy Saving Trust, heating accounts for about 55% of an annual energy bill*, so an efficient boiler makes a big difference. With an estimated four million households not on the UK's main gas network, oil boilers are the primary heat source for many rural properties. Condensing oil boilers are renowned for their energy efficiency, extracting nearly all of the heat contained in the flue gases, turning it into additional heating energy while minimising waste.

The key component

There are many different parts and components that contribute to the long-term performance of these units, with one of the most important being the heat exchanger. Located at the heart of every oil boiler, modern heat exchangers have to withstand a number of elements in order to work effectively. These include various thermal and mechanical stresses, as well as unpredictable system water quality, dissolved oxygen and the effects of corrosive condensate. Given that the heat exchanger continually comes into contact with the water passing through it, the material it is constructed from has a crucial role to play.

The metals used to create heat exchangers have different properties, with variations in weight, corrosion resistance and conductivity all influencing component design. Stainless steel is an iron-based alloy combined with chromium (a minimum of 10.5%), which makes it resistant to corrosion. It also has a lower carbon content compared to cast iron and mild steel and, as a result, has become the preferred material for boiler heat exchangers.

While stainless steel is well-renowned for its use in gas boiler heat exchangers, it is equally beneficial for oil products.

Manufacturers focused on quality have recognised the advantages of incorporating stainless steel into their own products. Navien ensures its own range of LCB700 Blue Flame oil boilers benefit from the latest high-grade, 100% stainless steel heat exchanger technology. Not only does the material offer exceptional levels of energy efficiency, it is lightweight and provides long-lasting durability and ease of maintenance.

Making the grade

Many different types of stainless steel exist and often have other added elements to improve their weldability and formability. The higher the grade, the better the welding and heat transfer properties, so 100% stainless steel is the best option for oil boiler heat exchangers.

Furthermore, high-grade 100% stainless steel is often chosen as a heat exchanger material due to its robustness, as well as low reaction to contaminants in system water. This resistance to surface corrosion is essential for maintaining the lifetime performance of the boiler. In fact, 100% stainless steel heat exchangers can tolerate a wide pH band between 7 and 9.5, so will continue to operate as intended, even in the most challenging or acidic system water conditions.

Stainless steel heat exchangers also have a higher resistance to corrosion.

Any fouling on the surface area of the component will drastically reduce its heat transfer capability – an obvious disadvantage if a boiler is required to operate at a high flow rate. Fortunately, this is not an issue with 100% stainless steel heat exchangers, which are more than capable of operating effectively, irrespective of the



velocity of the system water. Enabling water to pass through at a higher flow rate ensures it will heat up faster, while minimising the risk of any blockages forming within the heat exchanger itself due to debris, soot or rust.

A brighter outlook

Due to stainless steel's exceptional performance and longevity, a boiler's warranty terms also benefit. At Navien, we offer a 10-year warranty on all our LCB700 Blue Flame oil boilers. Combining this with industry-leading blue flame burner technology and exceptional levels of controllability, it really is the most energy efficient condensing oil boiler available on the market today.

Finally, from a servicing perspective, 100% stainless steel heat exchangers can be easily removed and cleaned with water. As stainless steel is generally a cleaner material than the alternatives available, there is less chance of it being affected by the soot that can be created by partially burnt fuel deposits.

So, heating professionals should definitely be investing in boilers with stainless steel heat exchanger technology as they look to take their installations to the next level. With this component remaining integral to every oil boiler, adopting units with 100% stainless steel remains the most effective means of ensuring long-term durability, reliability and energy efficiency.

www.navienuk.com

* Source: Energy Saving Trust: <https://energysavingtrust.org.uk/advice/boilers/>



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What does the future look like for oil boilers?

Martyn Bridges, director of technical communication and product management at Worcester Bosch, discusses the state of play for oil boilers as we edge towards net zero.

As we look towards the Government's net-zero target, oil boilers are a hot topic, given the ongoing requirement to reduce or even eliminate oil consumption as part of decarbonisation.

In fact, the production and sale of oil boilers continues to increase, so there are some challenges that we will need to tackle if we wish to achieve government targets.

Alternatives are available such as heat pumps, and oil consumption reduction measures such as solar thermal and insulating housing, which all look to make the challenges we will begin to face even more overwhelming.

Ticking along

We have seen through the mid to latter end of 2020 and throughout 2021 no noticeable slowdown in the demand for oil-fired boilers, which are a brilliant solution for off-gas-grid properties.

Some of this demand may have been driven by scaremongering stories in the national press, where there has been an increase in articles about certain

boiler types being banned.

People have started to want to change their ageing boiler sooner, rather than later, to have the security of a new boiler ahead of changing restrictions in the coming years.

Under threat

However, we cannot deny the fact that oil boilers are listed as one of the heating sources under threat in the Government's net zero strategy.

The Government has publicly stated that off-gas-grid properties are the first on its roadmap to address.

Bio oils

That brings us to bio oils. Bio oils help towards the greening of the oil supply that an oil boiler works from, either as a blended version of kerosene mixed with some bio oil or 100% bio oil alternative.

With 100% bio being the goal, a blended approach initially is the most likely to encourage new entrants to the oil supply market.

However, between then and the supply chain starting to make this type of oil, the reduction in consumption could be enforced by the addition of a heat pump or solar thermal.



A heat pump would be able to deal with the heating system for around 70% of the time, leaving the oil boiler to deal with the colder winter months and any hot water generation needed.

Although the current state of play for oil boilers is looking promising, there are threats on the horizon, which we will be able to address when new information is available.

Bio oil or a blend will be the most likely solution when looking to meet the Government's net zero target, but it will be possible to reduce oil consumption with alternatives as heat pumps and solar thermal, and of course insulation of the property, where practical.
www.worcester-bosch.co.uk

New heat pump handover guide from Grant

Grant UK has produced a Handover Guide, which will be supplied with all Aerona³ heat pumps to provide homeowners with a comprehensive introduction to their new air source heat pump system. The Guide is designed to help end-users understand their new heat pump, how it works and operate it correctly.

A pivotal part of an air source heat pump installation is the customer handover. This procedure involves the installing engineer showing their customer how their new heat pump works and demonstrating the parts of the system an end-user needs to understand in order to achieve and maintain the desired comfort levels with their heating and hot water. To support this, Grant has developed the Handover Guide, which will be supplied with each unit alongside the installation manual and will support the installer onsite with their handover processes.



The Guide includes useful explanations about how the Aerona³ operates, its energy usage, its defrost cycle and how to monitor the system pressure. There is also a detailed section on how to set preferred temperatures with the controls, explaining the concept of 'setback

controls' and how this can help achieve maximum efficiency with their system.

"Air source heat pumps are a reliable, highly efficient low carbon heating solution that more and more consumers are installing in their homes," comments Kevin Ellis, renewables sales manager at Grant UK. "Heat pumps do not operate in the same way as traditional fossil fuel heating systems, so it is important that manufacturers help customers to fully understand how heat pumps work and how to achieve the best performances. Our new Guide will be supplied alongside all our heat pumps, and it is hoped that such a resource will be a useful reference for homeowners throughout their heat pump's lifetime."

To download the Guide, visit: www.grantuk.com/media/4106/aerona3-ashp-handover-guide_july-21.pdf.

Helping installers to reassure customers

Worcester Bosch has launched a new animation to support installers who want to educate their customers on what the future of domestic heating may look like.

The way the country heats its homes is changing, with carbon reduction targets set at net zero by 2050 by the Government. Nearly every month new information, regulations or policy is announced, which is causing alarm and confusion among the press and homeowners about how we will heat our homes, with the main issue revolving around the ban of natural gas boilers from 2025.

Worcester Bosch has created 'The Future of Home Heating', a short, informative video for installers to present to customers, which takes a look at the facts behind the headlines.

It reassures homeowners that gas boilers will not be banned from 2025 in existing properties, as well as looking at technology that may be introduced in the future such as 100% hydrogen boilers or electric heat pumps.

Carl Arntzen, CEO, Worcester Bosch commented: "We are already hearing from installers and heating engineers that their customers are raising concerns about the natural gas boiler ban. Some are even replacing boilers that are still only halfway through their lifetime.

"As the debate around reducing our carbon footprint and trials into new heating technologies continue, we felt that a simple explanation to homeowners of what the future of heating could look like was essential. If the UK rushes to replace their heating systems with heat pumps prematurely



they may restrict themselves from switching to a more suitable technology such as 100% hydrogen in the future.

"At Worcester Bosch, we are committed to a sustainable future and want to ensure that installers have the right information and guidance to inform their customers about domestic heating."

www.worcester-bosch.co.uk/professional/decarbonisation

Hounsfield launches new burner

Hounsfield Boilers has introduced a new state-of-the-art burner to its Tuscan range of domestic oil-fired boilers.

The new burner follows many months of research and development with Giuliano Corticini's team at Elco, part of the Ariston Thermo Group. Together they've created one of the most advanced and efficient burners on the market – the Hounsfield Burner by Elco.

Andrew Hounsfield, managing director, Hounsfield Boilers, explains: "We're passionate about staying at the forefront of technology; the new burner has been manufactured to our very exacting specifications and has undergone extensive testing to ensure the optimum burner set-up. We never rest on our laurels and although our range of boilers receives much praise, we're dedicated to constantly improving our boilers' functionality and performance, as well as ensuring their ability to adapt to HVO fuels."

The new burner is extremely easy for engineers to service and has a consumer-friendly design.

"The team at Elco has developed a combustion head with outstanding performance that minimises environmental impact and significantly



reduces Nitrogen Oxide levels to below 120mg per kilo watt-hour, which complies with the Energy-related Products Directive (ErP) combined with low electrical consumption," says Andrew.

"The burner boasts a very powerful but controlled ventilation system that ensures reliable operation, during windy conditions or tall conventional open chimney systems. Combustion air adjustment is made easy with a graduation of 1 for 14kw up to 6 for 30kw, and ceramic electrodes which do not break under pressure. It has

been designed with homeowners in mind; a rubber cover on the pump's pressure adjustment prevents users from inadvertently adjusting the pump pressure instead of the vent port to bleed air from the fuel supply line after they've run out of oil.

The new burner, which can also be adapted for HVO fuel, will be fitted to Hounsfield's entire Tuscan oil-fired boiler range, including condensing and non-condensing kitchen boilers, external floor standing oil boilers and wall hung internal and external boilers. www.hounsfieldboilers.co.uk

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1. According to expected future ERP regulations
2. New flame sensing system launching in 2021
3. For models with high efficiency electric motors

The Right to Repair offers a glimmer of hope

Andrew Hounsfeld, MD, Hounsfeld Boilers discusses the Government's new 'Right to Repair' scheme and the possible impacts on the oil boiler industry.

Nothing is more frustrating than spending large amounts of money on a new TV, freezer or even boiler, only to have it break down a year or two after buying it, and usually when the warranty period has just expired!

In July 2021 the Government introduced the 'Right to Repair', which will ensure that manufacturers produce spare parts for up to 10 years after a product has been discontinued. At the moment this legislation only applies to washing machines, dryers, dishwashers, fridges and TVs, but it is only a matter of time before it is extended to other products, including boilers, and I believe that this will be a good thing.

The boiler industry should take the advance warning of this current 'Right to Repair', to rethink how it does things. Manufacturers need to start redesigning their boilers to enable easy and efficient repairs. I have

always taken that approach into my designs.

For manufacturers, the big challenge will be supplying the parts for up to 10 years from the end of manufacture of a model. Keeping a warehouse of old parts for 10 years will come with a massive cost implication and my fear is that the cost will be passed onto the customers and will result in more boilers being ripped out as 'uneconomic to repair', all for the sake of a small part. This would undermine the whole idea of extending the lifetime of a product. However, it may actually force boiler makers to think smarter and really consider the quality of parts used.

I have always believed that the efficiency of a boiler is just a small part of being sustainable and reducing our carbon footprint. When the boiler industry, not just oil, has been designing boilers to a low price point,



the result is cheap, low quality parts which need frequent replacement.

Cheap parts cost the earth – they use up resources. I've always ensured our boilers use high-quality parts because I believe passionately that my customers understand the benefits of longer-lasting products. For manufacturers, using high quality parts could solve the problem of storing parts for 10 years, as longer-lasting means fewer parts to be replaced. The 'Right to Repair' may actually bring about a completely new way of working for many oil boiler manufacturers and that will be a good thing.

If the oil boiler industry can really rise to this challenge, and if HVO is adopted as the replacement fuel for kerosene, then the oil heating industry will have a great low carbon footprint future for many years to come.

www.hounsfeldboilers.co.uk

Worcester Bosch launches new installer promotion

Worcester Bosch has launched a new promotion called Fit 6 designed to give installers the opportunity to claim back rewards.

The Fit 6 promotion will enable Excelerate members to claim cashback based on the amount of additional boilers they purchase and install within the promotional period from 1 July-30 November.

In order to claim cash back and qualify for the promotional offer, installers must register each purchase through their Excelerate account and install either three or six boilers.



The cashback offers include:

- £150 cashback onto a Worcester Bosch branded Mastercard after purchasing, installing and registering three boilers within the promotional window;

- £250 cashback onto a Worcester Bosch branded Mastercard after purchasing, installing and registering six additional boilers within the promotional window.

Nicola Fisher, PR manager for Worcester Bosch, said: "We are always looking at ways to support and give back to installers and these promotions are a perfect example. We hope to see many installers across the UK taking full advantage of the cashback opportunities on offer!"

www.worcester-bosch.co.uk/professional/promotions



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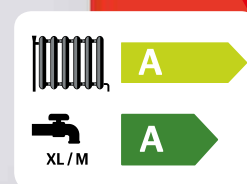
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Could Northern Ireland lead the way for renewable liquid fuels in home heating?

As Oil Installer reaches your desk, van or home, spare a thought for the civil servants who, over the summer months, have sifted through thousands of words in response to the Department of Energy's consultation call. The call closed on 2 July and their mammoth task ahead is now to collate, review and formulate a new energy strategy for the province to present to the economy minister by Spring 2022.

There is reason for optimism as, unlike in Great Britain and the Republic of Ireland, Northern Ireland civil servants are taking a pragmatic view to decarbonisation of heat and have clearly stated in the consultation that there is 'no one size fits all' simple solution.

One of the consultation questions is framed, "Do you agree that we should not rule out potential low and zero carbon heat solutions at this stage?" Also of note is the redrafting of one of the questions during the consultation period from, "Do you agree that the sale and installation of new oil boilers should not be allowed for consumers on the gas grid?" to, "Do you believe that on-gas grid consumers should have the option to retain oil boilers for use with biofuels?"

This is the result of strong engagement by OFTEC on behalf of the liquid fuel sector and numerous meetings with senior civil servants. They are genuinely interested in our proposal for decarbonising the off-grid sector using renewable liquid fuels and see HVO as a potential option to support carbon reduction plans.

Harnessing consumer buy-in

One of the biggest issues the Department has to face is consumer apathy – which is again where HVO offers a compelling solution.

Boiler replacements usually happen when a boiler breaks down and cannot be repaired – a 'distress purchase' situation. While many



Leinster House, Northern Ireland

consumers want to do the right thing and reduce their emissions, it's unlikely their passion will extend to spending at least £23,218* on a new green heating technology that may not be cheaper to run than their current liquid fuel heating system.

Households will also want the quick return of heating and hot water, so the many who live in older, energy inefficient properties may not be too keen on waiting days or weeks for a deep home retrofit to be completed so a heat pump can be effectively installed.

While there is talk of 'green' mortgages and loans to support the deployment of low carbon heating systems, consumers have shown a strong preference for a choice of low-cost options that cause minimal disruption to their homes.

The Department knows only too well that not all buildings are suitable for conversion to heat pumps, so other technologies are needed to achieve meaningful emission cuts over the next decade.

We believe that encouraging competition is necessary in a healthy

marketplace. We need to start now and combine the principles of energy efficiency, consumer choice and affordability as the key tenets for any strategy.

HVO ticks all these boxes and is available today, offering an immediate 88% reduction in carbon emissions compared to kerosene. If deployed across all 506,000 liquid-fuelled homes in Northern Ireland, we would see carbon emissions reduce from 3.285 million tonnes/pa to just 396,864 tonnes/pa. Renewable liquid fuels offer a low-risk pathway to decarbonising off-grid heating with instant impact.

So, what's next? Well, as part of the consultation, DfE asked for guidance on what pilot projects should be supported as part of its work on the strategy. OFTEC has submitted a joint proposal asking the Department to fund a 100-home trial of HVO over winter 2021/22.

Watch this space.....

* Source: OFTEC analysis in November 2020 of MCS average costs of certified installations data 2019



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Turning on the tap for renewable liquid fuel lobbying in ROI

Liquid fuels have long played a huge role in keeping homes warm across the Republic, where almost 40% use liquid fuel as their main source of heat. That's about 700,000 households that rely on oil-fired heating systems. Customers in every community know they can depend on oil, just as they can depend on the dedication and skills of OFTEC registered technicians to professionally install and maintain their systems.

But, as we face a climate emergency, we all need to play a role in assisting the Government to meet its, albeit ambitious, carbon emission targets.

To date, the proposals in the Climate Action Plan are all about electrification. Government has set out plans to install 400,000 heat pumps by 2030 and to have one million EVs on the road by 2030 – but they are already falling far short of this target. Government missed its carbon reduction targets in 2020 and the Environmental Protection Agency (EPA) is forecasting Ireland is still not on the pathway required to meet future targets for a climate neutral economy.

So why is government not listening to the liquid fuel sector and its proposal to move oil users to renewable liquid fuels as in Northern Ireland?

Well, it is not easy to do a U-turn on policy at such an early stage. But by failing to acknowledge the role that sustainable liquid fuels can play in slashing emissions, government risks delaying decarbonisation progress, while penalising consumers who cannot afford expensive options like the deep retrofits required to make many older homes suitable for an air source heat pump (ASHP).

Over 90% of Ireland's off-grid properties are below BER C1 and it is acknowledged that the average cost of a full scale deep retrofit in 2020 was €56,000.* Consumers will struggle to fund this expensive and disruptive work without significant support.

Raising a red flag

As our industry has proposed, we can move these consumers from kerosene to renewable liquid fuels and achieve massive carbon reductions of nearly 88%. In our mind it is simple; by not looking at renewable liquid fuels and engaging with the liquid fuel sector, the Irish Government has

overlooked the contribution we can make in creating a more sustainable, low carbon future.

That's why we have appointed the leading strategic communications and campaigning agency in the Republic of Ireland, Red Flag, to highlight how we can help achieve Ireland's climate targets.

Red Flag has an extensive track record in winning campaigns for some of the world's largest companies and trade associations. The agency will be working with us, UKIFDA and Fuels for Ireland to highlight the role that low carbon liquid fuels can play in reducing emissions in a way which is affordable to all households.

A key part of this work will be to raise awareness among politicians and decision makers of the crucial role that these fuels can play, supported by strong, independent research carried out by AECOM.

To bring about the sustainable future we all want, it is imperative that the Irish Government considers all the options available and we, and our new partner Red Flag, are committed to ensuring they do.

*superhomes.ie

A large, stylized red banner with a white border, containing the text "RED FLAG" in bold, white, uppercase letters. The banner has a wavy, ribbon-like appearance.

RED FLAG

Tuffa upgrades to Ultra Compact isolation valve

At Tuffa Tanks we pride ourselves on only using premium components in the construction of our tanks. As such we have recently switched to supplying the Ultra Compact fuel tank isolation valve with all our bottom outlet fuel storage tanks, including plastic and steel oil tanks and our best-selling Fire Protected Oil Tank range," says Tuffa UK's product development manager, Glenn Birks.

"We know the Ultra Compact valve has a proven track record with installers and have had great feedback since supplying the valve as standard. As a manufacturer of a range of fuel tanks from heating oil, diesel and petrol we know that future-proofing Tuffa's tanks is vital for our customers. Rest assured, the Ultra Compact isolation valve is compatible with HVO and biofuels to B35 specification so will stay up to date for many years to come.

"While the quality of the materials used is first-rate, it's the perceptive design of the valve which sets it apart



1200 litre plastic bunded Fire Protected Oil Tank fitted with Ultra Compact isolation valve



Tuffa's tank pack which now includes the Ultra Compact isolation valve as standard

from conventional forms of tank outlet kits. The Ultra Compact Valve providing safe isolation as the very first component, and potentially saving the engineer several hours on jobs such as replacing the filter valve which would otherwise require draining and refilling the tank.

Tuffa UK's general manager, James Shenton, highlights this key feature as the main reason behind the move to an Ultra Compact Valve "Moving to

the Ultra Compact tank pack solution was an easy decision to take; it has been designed with the tank installer in mind and they are the main focus for us as a business. Overall, we believe upgrading to Ultra Compact Isolation Valves will make a valuable addition to our entire range of bottom outlet fuel storage tanks and we will continue to invest in innovative products where there is a tangible benefit for our customers and the end-users of our tanks." www.tuffa.co.uk

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Base vs Platform – getting sizing right

OFTEC's technical department is often asked about the size of tank supports where a fuel storage tank is raised above ground level. What size should the base at ground level be? What size should any raised platform be?

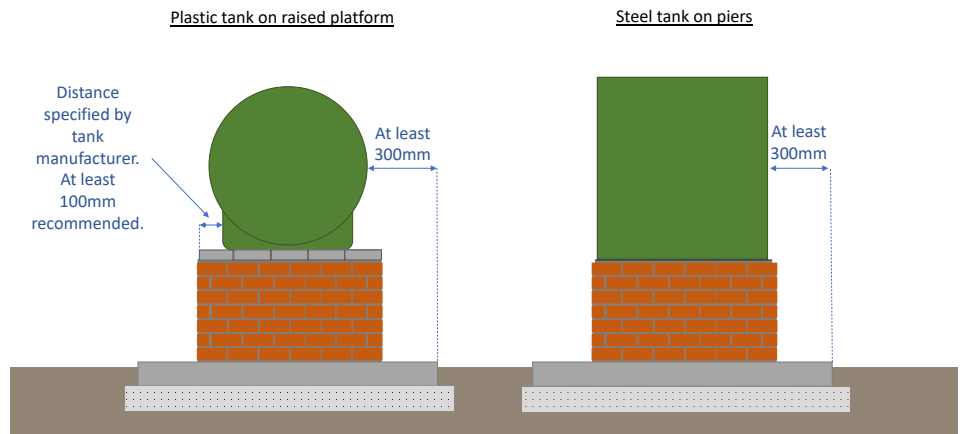
For us to understand this, we need to know the difference between a base and a raised platform.

A base is a construction at ground level that supports a fuel storage tank. For a raised tank, it will also support any other tank supports. Bases are usually constructed of poured concrete or paving slabs, laid on compacted hardcore.

Where a plastic fuel storage tank is raised up, it will need to sit on a construction laid on top of masonry piers. This construction should provide an impermeable, non-combustible and level support for the tank. This is referred to as a platform. This is often constructed of tightly abutted lintels and/or paving slabs.

Plastic tank on a raised platform.

OFTEC recommends that a raised platform extends at least 100mm



around the perimeter of a fuel storage tank. This measurement is from the footprint of the tank to the edge of the platform. Manufacturer's instructions must be checked, as they may require a greater distance.

A base at ground level that extends at least 300mm around the tank is still required. This measurement is taken from the widest part of the tank.

Steel tank on piers or a purpose-designed steel stand

Steel tanks do not require a raised platform but do require a base at

ground level that extends at least 300mm around the tank. Again, the measurement for the base is taken from the widest part of the tank.

Why do we need a 300mm base at ground level?

Apart from providing adequate structural support, tank bases reduce fire risk by ensuring that fuel storage tanks do not become overgrown.

Further detail, including the makeup of tank bases, is available in OFTEC Technical Book 3, Section 1.7 to 1.9.

Essential Irish standards

The National Standards Authority of Ireland (NSAI), Ireland's official standards body, has released two new publications that are essential reading for any plumbing and heating professional working in the Republic of Ireland. They are:

- S.R. 50-1:2021, Water based heating systems in dwellings;
- S.R. 50-3:2021, Hot and cold water supply for dwellings

The standards have been drafted in such a way that the reader should not have to reference or purchase additional standards (apart from fuel specific information such as gas, liquid fuel, solid fuel etc). They include the full process for installing plumbing and heating systems, setting out what is considered good practice.

OFTEC has reviewed these publications and would draw your attention to the following notable recommendations/reminders:

- Internal appliances should be sited

on outside walls.

- Combi boilers should not be connected to mains water supplies.
- Unvented water heaters shall only be fitted, installed, commissioned and serviced by a person trained and certified by the manufacturer of the unvented hot water system or other authorised body.
- External pressure relief valve pipes should be prevented from freezing.
- Direct boosting of mains water supplies is prohibited.

Solid fuel only

- Open-vented gravity circuits should have a pressure relief valve installed as the first device on the flow pipework, within 400mm of the appliance.
- TRVs should not be fitted on solid fuel-fired heating systems, to prevent overheating of the heating system while the rooms have reached the desired temperature.
- As part of the commissioning

process, the electricity supply shall be shut off to simulate a power failure. The system shall be inspected to ensure that it still operates as intended without over-pressure or over-temperature conditions arising.

- A heat-leak radiator is required in all installations where a solid fuel heating appliance does not have an automatic overheat prevention thermostat. One is also required where an insulated cylinder is present.
- The installer shall advise the client in writing that the heat emitting from the heat-leak radiator shall not be obstructed by drying clothes or any other insulator. A 'DO NOT COVER' label should be attached to the heat-leak radiators.

The list above represents a snapshot of the standards contents only. OFTEC recommends that all technicians working in Ireland purchase these standards that are available at <https://shop.standards.ie>

Pre-quotation checks for combi boilers

Here's a true story. An installer successfully quoted for an entire new heating system installation, including a combi boiler, for a rural farmhouse.

On the first day of the installation, immediately after all the materials arrived, he used the property's upstairs bathroom. When he opened the cold tap to wash his hands, he was horrified to find that no water came out. The reason? Another tap was running downstairs and the dynamic water pressure of the cold mains was so low that there was no flow – in fact, air was being sucked into the pipework through the tap!

That was an expensive mistake as there was no way a combi boiler was going to be suitable for that property and the whole system had to be redesigned.

This account illustrates well that spending a few minutes undertaking some basic checks before quoting for the installation of a combi boiler can save a lot of pain later. Let's consider four tests that are essential.

Static water pressure test

This identifies the maximum pressure in the cold mains pipework when all taps and outlets are closed and no water flowing.

Why undertake this test?

Too great a pressure can damage boiler components and/or cause leaks. Boiler manufacturers will specify a maximum permitted water pressure in their installation instructions, and this should be checked – it could be lower than you think. If the static water pressure exceeds the maximum permitted by the boiler manufacturer, a pressure reducing valve will be required.

How to perform this test.

Attach a pressure gauge to either an outside tap or other outlet on the cold mains pipework and slowly open the tap/outlet and take the reading. Bear in mind that readings can vary at different times of the day, with greater static pressure likely at night when no-one in the neighbourhood is drawing water. Keep the pressure gauge connected in this way for the next test.

Dynamic water pressure test

This identifies the minimum pressure in the cold mains pipework when taps/outlets are open and water is flowing. This will always be lower than the static pressure.

Why undertake this test?

If dynamic water pressure is too low, the boiler manufacturer's published hot water flow rates will not be achieved. Boiler manufacturers will specify a minimum permitted dynamic water pressure in their installation instructions, and this should be checked – it is usually somewhere between 1.0 and 1.8 bar.

How to perform this test

With the gauge connected as shown above, run one or two cold water outlets and take the reading.

Flow rate test

This identifies how much water will flow from the taps when one or more taps/outlets are open and water flowing.

Why undertake this test?

It cannot be presumed that there will be an adequate flow rate of hot water just because the minimum dynamic water pressure is acceptable. There is not a direct link between pressure and flow. It is possible to have high pressure with low flow and vice versa. Therefore, the flow rate at the property's taps/outlets needs to be checked. Otherwise, the boiler manufacturer's published hot water flow rates may not be achieved. This is especially likely when other taps/outlets within the home are used at the same time.

How to perform this test

Using a weir gauge/flow cup at a mains water tap, measure the flow rate. Next, open another cold mains water tap/outlet or two. Compare these readings



Pressure gauge



Flow cup

to the water demand for the property (the 2021 Domestic Heating Design Guide details minimum flow rates for simultaneous demand – available from the OFTEC Direct shop).

Water hardness check

This identifies the 'temporary hardness' of the incoming cold mains water.

Why undertake this test?

Regional building regulations guidance documents state that water with a temporary hardness in excess of 200 ppm should be treated to prevent limescale build-up. Some boiler manufacturers set a much lower maximum hardness in their installation instructions, and this should be checked as warranties will not likely be honoured otherwise.

How to perform this test

Simple, inexpensive test kits are available. For example, test strips are available that only need to be dipped in a sample of the water for a few seconds before having their colour change compared to a chart that indicates the temporary hardness.

In total, the checks above will only take a few minutes to undertake but will prevent you the pain associated with specifying combi boilers that will not perform as anticipated.

New – Domestic Heating Design Guide 2021

This republished guide is the work of the Domestic Building Services Panel, a joint initiative of the heating industry in collaboration with the Chartered Institution of Building Services Engineers (CIBSE).

The guide covers:

- System information
- Customer liaison
- System design (Heat loss)
- System design (Domestic hot water)
- System design (Heating).

This publication has been comprehensively restructured and updated and provides a multitude of useful information and guidance for designers and installers.



You can purchase a copy from the OFTEC Direct shop by logging in to your registered business hub at www.oftec.org.

Air supplies 101

Despite its importance, air supplies for appliances can sometimes be overlooked. The following information provides some reminders on the requirements for air vents serving domestic liquid fuel-fired appliances, including the source of air for combustion and ventilation, and further points for consideration.

Combustion appliances require an adequate supply of air for combustion to prevent overheating and for the efficient working of any flue. Correctly sized, dedicated, permanently open air vents are used for this purpose. Air vents should:

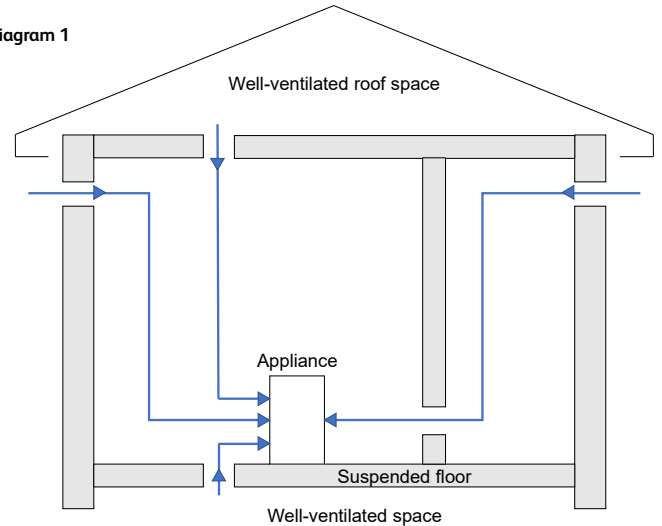
- be non-adjustable;
- be sized to admit sufficient air for the purpose intended;
- be positioned where unlikely to become blocked and installed so that the building occupants are not provoked into sealing them against draughts or noise. This usually involves installing any vents in external walls at high level;
- be sleeved across walls;
- not be made in fire resisting walls other than external walls;
- not penetrate external walls shielding LPG tanks;
- not be located within fireplace recesses except on the basis of specialist advice;
- not contain grilles or meshes with openings having a dimension less than 5 mm.

Air can be sourced from any of the locations shown in Diagram 1.

Further important considerations for air supplies include:

- Appliances should not draw combustion air from a bathroom, bedroom or a garage.
- Air should not be drawn from underfloor spaces in an area

Diagram 1



- where radon gas accumulations occur.
- Although room sealed appliances are designed to take combustion air directly from outside, they will still require ventilation if installed in a compartment.
- Any potential source of flue draught interference should be identified, including extractor fans, mechanical heat recovery ventilation (MHRV), tumble driers, other appliances etc. Further ventilation may be required to provide 'make up' air for such equipment.

For further information, including correct sizing of air supplies, please reference OFTEC Technical Book 4, Sections 1.8 and 1.9.

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WRAS - Water Regulations
UK Cert - Unvented Hot Water (HWSS)
UK Cert - Combination Boiler Fault Finding and Controls

OFTEC 101- Domestic single stage service and commissioning for pressure jet appliances.
OFTEC 102- Service and commissioning vapourising appliances.
OFTEC 105e- Installation of Oil fired appliances.
OFTEC 600a- Installation of Oil fuel storage and supply systems.
OFTEC 201- Multi stage pressure jet servicing and maintenance.

HETAS - H001 Introduction to Solid Fuel
HETAS - H002 Solid Fuel regulations and Standards
HETAS - H003 Dry Appliances
HETAS - H004 Wet Appliances
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New Grant training facility for online courses

Grant UK's Training Academy has reconfigured part of its facilities onsite to allow for the development of a new area which will be used for the delivery of online training courses via the Grant eLearning Academy.

The Training Academy at the company's head office in Devizes has been established for almost two decades and during that time, the premises have been adapted to meet the ever-changing training requirements of heating engineers. Starting out providing oil boiler training and OFTEC qualification and assessments, the Academy later expanded to offer a comprehensive selection of courses on renewable heating systems. Today, air source heat pump courses are the most popular with over 700 installers and heating engineers completing heat pump training through the Academy within the last two years.

Last summer, Grant's training support entered a new era with the launch of



Training room revamp for Grant

its eLearning Academy. Through the eLearning Academy, a range of free courses, as well as on-demand and instructor-led courses, are available for installers and heating engineers to access remotely, from the comfort of their home or offices. Interest and demand for online training has significantly increased due to a combination of restrictions during the pandemic and increasing time pressures on installers who may be unable to travel to training centres. To meet this demand and to enable Grant's training team to schedule and deliver more instructor-led online

training, the facilities have been adapted once again.

In February, work got underway to reconfigure one of the training rooms and the company now boasts a new separate training room which provides space for trainers to host online training.

"The ways in which engineers and installers want to receive product training has significantly changed over the years," comments Phil Stanley, Grant's training manager. "Face-to-face training remains the preferred method favoured by installers but the past twelve months have made us adapt and through the Grant eLearning Academy, we have been able to continue providing quality training to heating engineers throughout the country. This latest development at our premises in Devizes has made better use of the space we have and will help us increase our online course capacity." www.grantuk.com

Navien delivers vital face-to-face training

Navien has reintroduced its exclusive one-day training sessions, delivering essential information about the company's range of oil and gas boilers, as well as its energy saving smart controls. As restrictions continue to be eased, face-to-face training has resumed in multiple locations across the UK, giving installers the opportunity to attend a nearby session. The free course is designed to enable engineers to keep their skill sets up to date, as well as informing them of any recent technological and product developments. All attendees receive lunch on the day, as well as a giveaway pack to take home worth £300.

Each training day includes an insight into the company's revolutionary LCB700 oil boiler and NCB domestic gas boiler ranges. The LCB700 boasts Navien's renowned blue flame technology which can produce efficiencies of up to 104%. The course covers a variety of topics, including as an outline of the oil range and its key components; parameters on the control panel, adjusting the oil pump and measuring combustion; plus, essential service and maintenance information.



The training day also comprises a presentation of Navien's A-rated NCB domestic gas boiler range, providing a detailed explanation on its control panel and key parameters, which includes high and low temperature settings, service process and essential maintenance information. Each dedicated section is designed to expand installers' knowledge of the oil and gas boiler line-up and provide a comprehensive overview of all the extensive features and benefits. Attendees will also receive an extra year's gas boiler warranty upon successful completion of the training.*

The course also includes a demonstration of Navien's Smart Plus controllers showing first-hand the essential programming and installation process and providing engineers with additional information they can relay to their end-user customers. This includes key features such as monitoring of domestic hot water usage, supply/return water temperatures and the ECO function, which could greatly reduce their energy and water consumption.

Commenting on the re-launched training days, Sean Keleher, national technical manager, said: "We are excited to provide face-to-face training again, supplying installers with the skills they need for fast, easy boiler installation and servicing, while helping them develop their businesses. Plus, heating engineers who successfully complete the course will receive an exclusive free gift pack, so it's really a win-win for us all!" www.navienuk.com

* Terms and conditions for additional warranty for attending training: Installers attending the Gas boiler product training will be entitled to 1-year additional warranty for the NCB current boiler range. If the individual or business already have extended warranty or are taking advantage of any other Navien offers, then no additional warranty can be added.



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Gallery classics

It's been a bumper summer and we've been inundated with photos of poor workmanship. Here are four of our favourites from OFTEC registered technicians, Mark Pollard, Pete Farr, Lincoln Smith and Mark Brazendale. For your chance to be featured on our Gallery page, send your photos, company information and a description of the installation to liz@oilinstaller.co.uk.



Send your photographs to liz@oilinstaller.co.uk

Horror house

Lincoln Smith from Rugby-based Custom Heat Ltd shared some unbelievable photos of an oil tank in a house. He commented: "A first for us! It must stink and who on earth fills it up?"

Needless to say, the customer is now having a new tank fitted in the garden.



A rat's nest

Mark Brazendale was called out recently to a smoking boiler. "The problem was a plastic bag, which had been dragged into the boiler by a rat returning to its nest," explained Mark. "The bag had been pulled into the fan, which caused the smoke, but then it ripped apart, allowing more air in."

Mark is self-employed and works in the Salisbury area replacing, servicing and maintaining oil boilers and carrying out central heating repairs.



Fire valve fail

Pete Farr, a registered installer from Llanrwst in North Wales, encountered a problem while servicing an old Heatslave boiler.

He explains: "I asked the homeowner where the fire valve was so I could check it, but he wasn't sure. Even when we took the covers off, we couldn't find it, although there was a fire sensor, which was exactly where it should be.

"I had to return to the property to replace the tank valve and in the interim, the homeowner asked the original installer where the fire valve was located. It turns out that it was under a slate in the footpath, so we duly replaced it, along with all the existing pipework from the tank to the boiler."



Hidden away under a slate – the fire valve of an old Heatslave boiler



Condensate issues

We just had to share this absolute cracker from heating, plumbing and AGA specialist, **Mark Pollard**, who is based in Gloucestershire. The boiler was installed and serviced regularly by a registered installer.

"The ground has dropped due to the condensate soakaway being installed too close to the concrete base," Mark told Oil Installer. "It should be a minimum of 500mm away from the base. The condensate pipework had cracked as the boiler dropped and over time, rotted the bottom of the boiler out. We had to remove the boiler and base and start again, moving the soakaway the correct distance away from the base."

OFTEC will contact Mark to request more details with a view to investigating the installer concerned.



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Fuel price commentary

Price rises in the energy sector are big news at the moment. The regulator, Ofgem, has given suppliers of electricity and gas the green light to raise prices by up to £153 a year. This applies to households that use a default energy tariff to buy their gas and electricity. The effect will hit those on low incomes in poor quality accommodation the hardest because they spend the largest proportion of their income on energy. The price rises approved by Ofgem are said to be due to increases in the wholesale price of energy.

This news came after the latest round of Sutherland Tables data was published, and it will take some time before the effect of the increases approved by Ofgem show up in the data we publish here. However, it is already noticeable that prices are heading upwards for some heating types.

Crude oil has a significant impact on the price of kerosene, which closely mirrors any wholesale price changes. The bad news for oil heated households is that, since late in 2020 the price of Brent crude has climbed relentlessly from around \$45

a barrel, to over \$70 now – the highest price for over 18 months. This accounts for the dramatic increase in the price of kerosene compared to a year ago, but it's worth noting that it's still some way below the four-year average. However, increased crude oil production is expected to hold prices at close to this level for the rest of 2021.

The biggest winners in the last quarter have been households using gas but, unfortunately, their good fortune is likely to be quite short-lived.

Comparative space and water heating costs for a three-bedroomed home In Great Britain, Northern Ireland and the Republic of Ireland.

GREAT BRITAIN

	Average: Jul17-Jun21	July 20	June 21	Price change	% difference
Electricity (Economy 7)	£2,045	£2,098	£2,282	£184	8.77%
Gas (British Gas - condensing)	£941	£914	£787	-£127	-13.89%
LPG (condensing)	£1,547	£1,561	£1,386	-£175	-11.22%
Oil (condensing)	£951	£582	£825	£243	41.66%
Wood Pellets	£1,476	£1,517	£1,504	-£13	-0.84%
Air source heat pump radiators	£1,783	£1,827	£1,900	£73	4.02%
Air source heat pump underfloor	£1,415	£1,398	£1,590	£192	13.72%

NORTHERN IRELAND

	Average: Jul17-Jun21	July 20	June 21	Price change	% difference
Electricity (Economy 7)	£1,778	£1,983	£1,882	-£101	-5.09%
Gas (Phoenix - condensing)	£937	£861	£838	-£23	-2.67%
LPG (condensing)	£2,081	£2,059	£1,741	-£318	-15.44%
Oil (condensing)	£935	£596	£744	£148	24.83%
Wood Pellets	£1,140	£1,206	£1,163	-£43	-3.57%
Air source heat pump radiators	£1,599	£1,725	£1,639	-£86	-4.99%
Air source heat pump underfloor	£1,278	£1,299	£1,359	£60	4.62%

REPUBLIC OF IRELAND

	Average: Jul17-Jun21	July 20	June 21	Price change	% difference
Electricity (Urban Night Saver)	€2,132	€ 2,137	€2,263	€ 126	5.90%
Gas (Bord Gais condensing)	€1,332	€ 1,299	€1,158	-€ 141	-10.85%
LPG (condensing)	€2,359	€ 2,463	€2,175	-€ 288	-11.69%
Oil (condensing)	€1,287	€ 928	€1,189	€ 261	28.13%
Wood Pellets	€1,361	€ 1,391	€1,282	-€ 109	-7.84%
Air source heat pump radiators	€1,866	€ 1,869	€1,947	€ 78	4.17%
Air source heat pump underfloor	€1,527	€ 1,471	€1,665	€ 194	13.19%

Notes. The tables above are based on quarterly data published by the Sutherland Tables. They show the annual average cost of a range of heating options for a typical pre-1980 three bedroomed semi-detached home with a heat requirement of approximately 16,000 kWh.

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