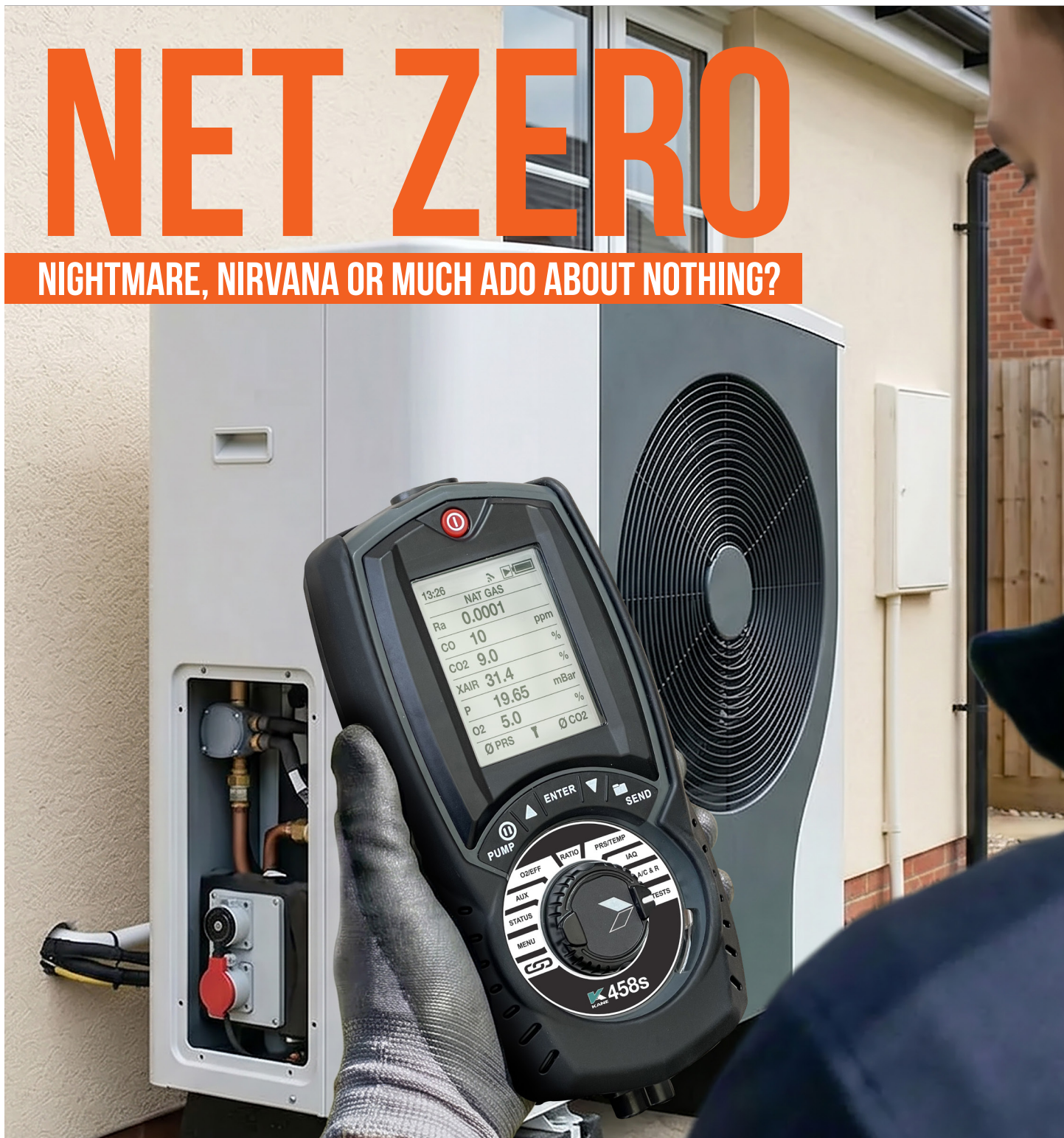


NET ZERO

NIGHTMARE, NIRVANA OR MUCH ADO ABOUT NOTHING?



With the UK's journey towards Net Zero gathering pace, what does it really mean for the heating engineer? **Jonathan Kane** CEO of KANE considers the scale of the challenge, the realities of the UK's existing housing stock and why a pragmatic, multi-technology approach may be more effective than an "all or nothing" solution

When I was younger, I was told, with tongue firmly in cheek, to learn from the six phases of project management: Enthusiasm,

Despair, Failure, Search for the Guilty, Punishment of the Innocent, with praise and honour for non-participants. I.e., doing nothing rewards you.

Today's heating engineers must

wonder if the UK's Net Zero campaign has followed this scenario, given that most media articles suggest we're already at phase four, or "Search for the Guilty".

While interesting, is this helpful?

I say no. If I promised to give you great heating and hot water with zero emissions and low running costs, what's not to like?

I have not drunk the Net Zero Kool-Aid, but simply believe the UK will reach Net Zero and deliver great benefits, just perhaps not in my lifetime.

This seems amplified by most



MORE MULTI-SKILLED ENGINEERS ARE NEEDED

forecasts predicting that over 30% of our homes and businesses will still use fossil fuels in 2050.

The scale of the challenge becomes clearer when we look at where we are today. The latest ONS analysis of Energy Performance Certificate data found that only 1.4% of properties in England and 1.5% in Wales had a heat pump listed as a source of central heating. For existing homes, the figures were even lower, at 0.8% in England and 1.0% in Wales. New homes are already moving faster, with heat pumps installed in 4.2% of new

dwellings in England and 5.5% in Wales.

The Government's ambition makes the potential scale of the change clear. Its latest Warm Homes Plan aims to support over 450,000 heat-pump installations per year by 2030, alongside upgrading up to 5 million homes by 2030.

These numbers show that this is not simply a case of switching one technology for another. The UK has an enormous installed base of gas and oil heating systems, alongside millions of buildings with very different levels of insulation, fabric efficiency and heating requirements.

So, should our heating engineer heroes close their eyes and do nothing, or consider Net Zero a genuinely realistic business opportunity?

My answer is yes and yes. Some will stay in their lane, knowing there is a market for their services long after 2050, while others will actively participate in the Net Zero journey without losing the skills required to install and service today's oil boilers and gas cookers.

"The UK will reach Net Zero and deliver great benefits, just perhaps not in my lifetime"

This will only happen if Government and Industry ensure our Net Zero heroes experience a similar or level playing field. There aren't enough engineers trained to deliver Net Zero, and the UK will need a substantial proportion of its more than 120,000 Gas Safe registered heating engineers to develop the skills needed to work with new technologies and join the Net Zero revolution.

And why not? French and American heating engineers have long installed and serviced gas, oil and electrical heating and cooling equipment, so why not the UK?

However, it's unrealistic to expect UK heating engineers to swap years of fossil fuel experience and equipment for new technologies if they seem expensive to install, with no guarantee of better or cheaper heating. Customers won't appreciate changing their familiar heating system for a technology they can't afford or know little about.

This is not helped by Net Zero zealots demanding everything be all-electric, despite the availability of intelligent CO₂-reducing options such as HVO carbon-free oil, or gas grid decarbonisation using hydrogen and biomethane.

The project is also not helped by our Government stopping customers in



around 10 million hard-to-treat homes from using the Boiler Upgrade Scheme to create hybrid systems. For many of these properties, a hybrid approach could provide a practical way to reduce CO₂ emissions without necessarily requiring a complete replacement of the existing heating system.

It seems successive Governments consider these "Near Zero" solutions to be distractions. Why, when every little CO₂ reduction helps?

I am not talking about new-build homes or homes undergoing deep renovation. Given this once-in-a-lifetime opportunity, it makes sense for Building Regulations to demand Net Zero solutions. The problem is that this only directly addresses new homes, with the Government aiming to support the delivery of more than 300,000 homes a year in England. The much bigger challenge is therefore the existing housing stock, which will require millions of homes to be upgraded over time.

It's not helped by those who tell us how we successfully changed our homes from town gas to natural gas. Few remember the work required, and no one will acknowledge the eye-watering cost of delivering Net Zero.

An "all or nothing" argument does not win hearts and minds. Governments don't always know best, especially given the reputational damage over ECO programmes and the failed Green Deal.

The condition of the existing housing stock is particularly relevant. ONS data shows that existing homes in smaller rural areas tend to have substantially lower EPC scores than homes in urban areas. In England, the median EPC score for existing homes in smaller

rural areas was 59, compared with 68 in urban areas. In Wales, the figures were 55 and 68 respectively.

That helps explain why the role of the heating engineer is unlikely simply to disappear or be replaced by a new generation of specialists. The transition will require engineers who understand existing buildings and existing heating systems, while also developing the skills to install and maintain newer technologies.

SO WHAT SHOULD OUR HEATING HEROES DO?

I suggest adopting a typically British pragmatic response: learn the skills, understand the opportunities and use the tools needed to deliver Net Zero.

For example, a one-week F-gas course will give most heating engineers sufficient knowledge to safely install electric heating and air conditioning for a reasonable cost and payback.

“The challenge is to make sure that engineers have access to the training, qualifications and practical tools needed to work safely across these technologies”

The course will also signpost Net Zero opportunities and when to leave them alone. For example, replacing a boiler with a heat pump in a pre-war, hard-to-heat home without sufficient insulation, double glazing and correctly sized radiators makes no sense, potentially damaging the finances and comfort of the very people Net Zero Heroes want to help.

Our industry must continue to campaign for the complete adoption of the Benchmark logbook scheme and lobby for hybrid heating systems to be included in the Boiler Upgrade Scheme. The current BUS requires installers to be MCS-certified and ignores the value of the Gas Safe Register and OFTEC.

Consequently, too few registered heating engineers currently have MCS certification, while the low-carbon heating market remains small compared with conventional heating. Since its launch in 2022, the Boiler Upgrade Scheme has supported approximately 70,100 heat-pump installations, although the Government reports that demand is now increasing significantly.

The skills requirement is already becoming apparent. The Government estimates that around 10,000 trained installers are currently active in the low-carbon heating market, with this



HOMES IN RURAL AREAS WILL NEED GAS ENGINEERS FOR LONGER

expected to increase to approximately 12,000 full-time-equivalent installers by 2030. Many of these engineers will continue to work on gas boilers alongside their growing heat-pump customer base.

Finally, our Net Zero heroes need support from tool and test equipment companies, including KANE, which has committed to helping heating engineers also become electrical heating engineers. Engineers know that testing after installation or servicing is the only way to confirm systems meet manufacturers' requirements, regardless of how they are fuelled, and they need affordable tools to do this.

THE OPPORTUNITY FOR HEATING ENGINEERS

The numbers suggest that the heating engineer's role is likely to become broader, rather than disappear. The Government's plans represent a substantial increase in low-carbon heating installations, while the existing gas and oil heating market will continue to require installation, servicing and maintenance.

For engineers, this means that developing additional skills could provide a way to participate in the

transition without abandoning the knowledge and experience built up over many years.

The challenge is to make sure that engineers have access to the training, qualifications and practical tools needed to work safely across these technologies. Whether the system uses gas, oil, HVO, biomethane, hydrogen blends, a heat pump, a hybrid system or electricity, the fundamental requirement remains the same: it must be correctly installed, commissioned, tested and maintained.

To conclude, today's heating engineers shouldn't worry about the UK's Net Zero future as long as they keep learning. Gas and oil heating systems will still be around in 2050, but there will be more opportunity and demand for engineers who can also deliver all-electric solutions, most of which we will be using within the next 50 years.

Net Zero could be an important opportunity for heating engineers. They already have many of the practical skills required to install, commission, service and maintain heating systems, and expanding those skills to cover emerging technologies will allow them to play an active role in the transition. 🔥

