

ADVECO NEWSLETTER

A decorative graphic featuring a horizontal splash of water in shades of green and white, with bubbles and ripples, positioned behind the main title.

April 2023

Welcome to Adveco's April newsletter.

The demand for hot water remain consistent year round, but with the arrival of Spring, we can anticipate warmer weather around the corner and better conditions for executing planned building projects. With demand increasing, if you are planning upgrades to existing hot water systems or commencing a new build now is a good time to get in touch.

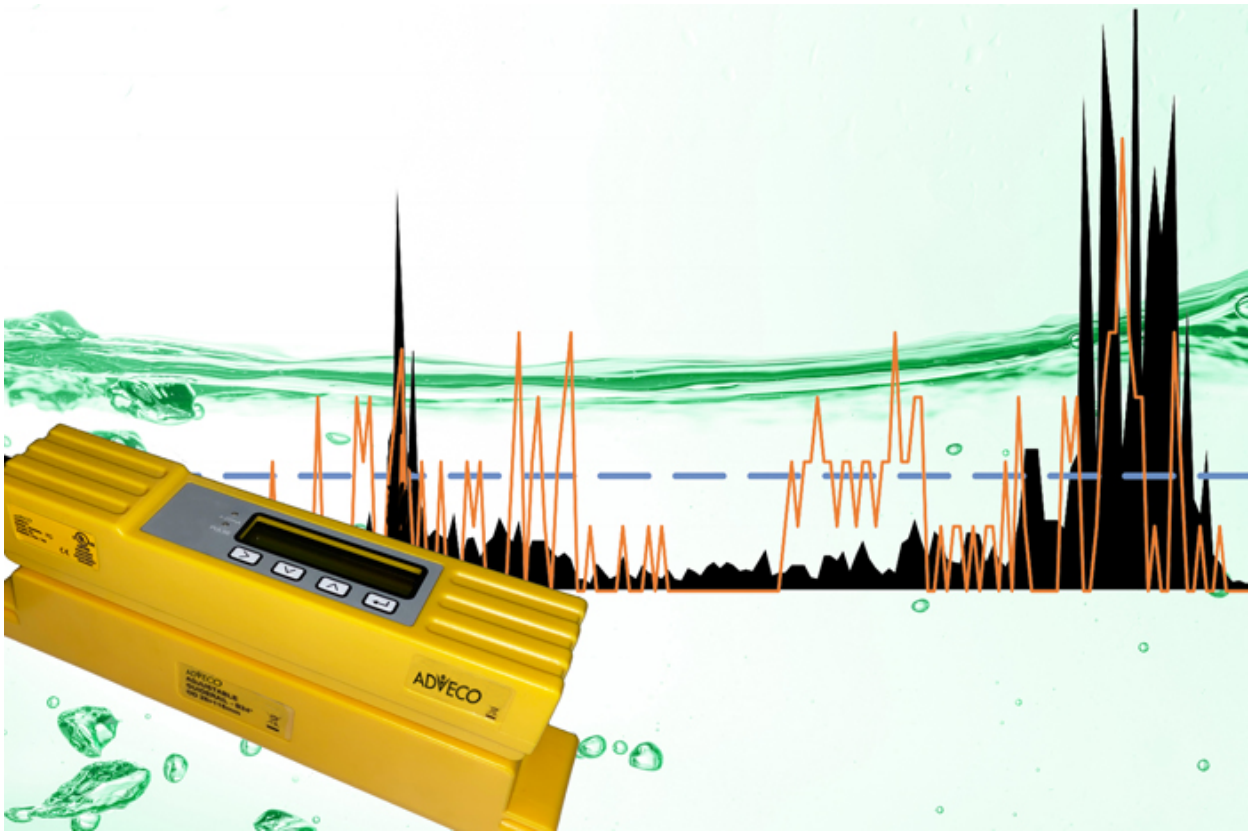
If you are considering moving from gas to electric water heating to improve sustainability read how metered data can save thousands from a project's costs.

We also take a look at the UN's pivotal report on climate change and ask if hydrogen really has a role to play in delivering net zero in the UK. And disaster response when a hot water system is beyond saving.

We would also like to take the opportunity of wishing you a very happy Easter break. Our offices will be closed Good Friday and throughout the Easter weekend. For emergency response please refer to details on the contact us page on the website...

CONTACT US

Avoiding Unnecessary Costs When Moving to Low Carbon Electric



We have all had that conversation when moving home, what will the cost be? The same goes for hot water systems in commercial properties, and organisations intending to replace existing gas-fired domestic hot water (DHW) systems with more sustainable electric technologies as part of a decarbonisation strategy should really think about invest in data gathering first.

Live Metering is a simple to install, non-invasive onsite service provided by Adveco that generates consistent six minute data 24 hours per day from existing hot water systems to accurately understand actual usage, including critical peak demands and their profile shape. Adveco's specialist engineers will visit to fit the meter and assess the site. The data will then be processed, and a report generated with design recommendations for a replacement system that meets the exact needs of the building.

The most consistent issue we see in hot water is oversizing, whether through lack of understanding of application design or concerns over providing suitable back up to ensure system continuity. The result of oversizing is always the same, unnecessary capital costs for system supply and installation. As the country seeks to adopt greener building operations, replacing old gas-fired systems with like-for-like electric is another guaranteed way to gain an oversized system. If the replacement system is oversized, costs climb as the price of electricity per kW remains high. Should demand exceed a building's available amperage of electrical supply, project installation costs will inevitably soar, or even stall the project. This can be avoided by understanding your actual hot water demands and designing the replacement to meet those specific needs. This is why accurate data is so valuable.

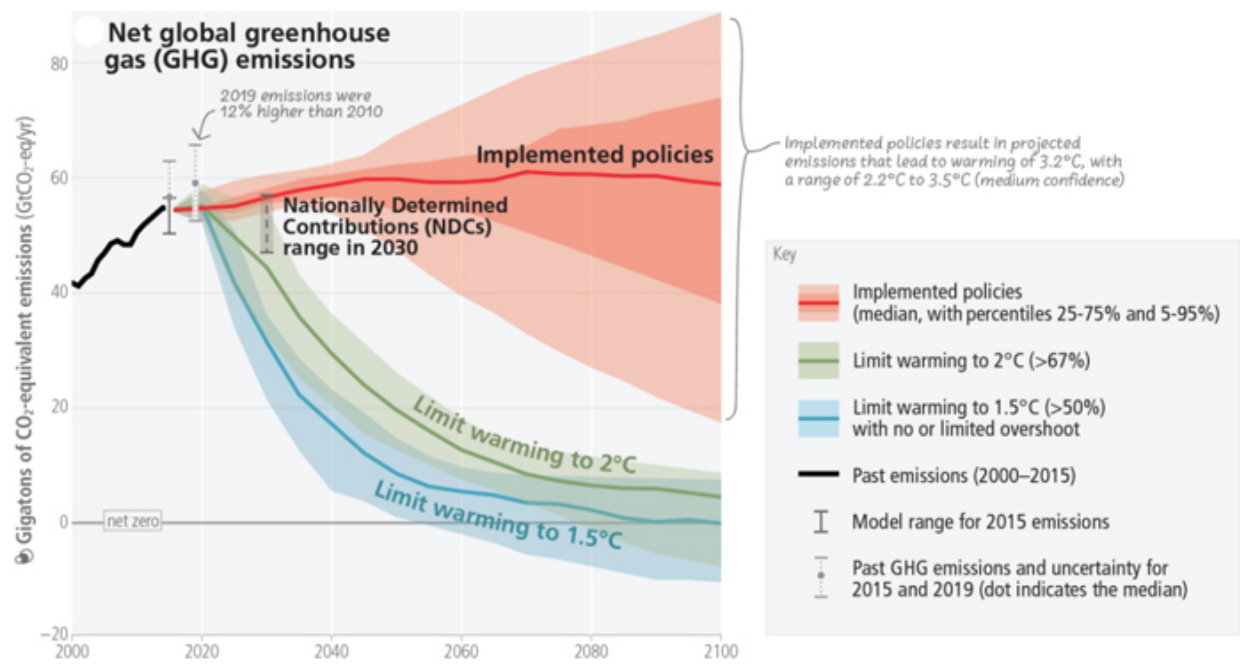
The recommended replacement design by Adveco will show carbon reduction and outline new operational costs. Accurate to the actual demands of the property, live metered designs avoid excess capital costs associated with oversizing and ensures operation within the limits of the existing electrical supply of the building. Savings from correctly sized appliances can be in the tens of thousands of pounds, but if unnecessary expansion of electricity supply can be avoided you could be saving hundreds of thousands of pounds.

If you opt to purchase the recommended replacement system from Adveco you will receive a 50% refund on the cost of implementing the initial Live Metering service. Means you invest hundreds to save thousands of pounds and gain a better idea of how to better plan and budget for future energy needs.

LIVE METERING

UN Report Paints Bleak ~Picture If Climate Change Is Not Addressed Now

In March the UN released its much anticipated [IPCC Sixth Assessment Report](#) summarising the state of knowledge of climate change. Its findings were unequivocal, "There is a rapidly closing window of opportunity to secure a liveable and sustainable future for all. Climate change is a threat to human well-being and planetary health, and the choices and actions implemented in this decade will have impacts now and for thousands of years."



Clean energy and sustainable hot water technology, as promoted by Adveco, can be exploited to help avoid the growing climate disaster as a part of wider decarbonisation strategies. But organisations need to be acting now. The UN report is clear that the options that are feasible and effective today will become constrained and less effective with increasing global warming. With increasing global warming, losses and damages will increase and additional human and natural systems will reach adaptation limits.

If emissions are not curtailed in line with plans to achieve net zero there is a very real threat of overshooting the target global temperature, this overshoot would entail adverse impacts, some irreversible. The higher the magnitude and the longer the duration of an overshoot, the more ecosystems and societies are exposed to greater and more widespread changes in climatic impact-drivers, increasing risks for many natural and human systems.

[READ THE UN CLIMATE CHANGE REPORT SYNOPSIS](#)

Are We Set For A Hydrogen Future?

Hydrogen is a versatile, clean-burning fuel that produces only water and heat when burned. It has the potential to play a key role in the transition to a low-carbon economy, particularly in

industries that are currently reliant on fossil fuels, such as the commercial heating and hot water sector.

Opting to use hydrogen to decarbonise comes with a number of potential advantages, especially for those organisations with higher energy demands and currently on gas. It could provide an energy source almost as cost-effective as natural gas, and cheaper than direct electric systems, as well as deliver a clear investment in sustainability which natural gas, a fossil fuel, does not.

Given the equipment for hydrogen remains familiar to operate and manage, and does not require major refitting of system components such as heat emitters capital costs should remain lower, while decarbonisation can be accelerated within a property.

For those desiring to adopt the hydrogen approach, there remains a question mark over how quickly, where and in what proportion hydrogen will be introduced into the gas grid. The ultimate aim is to introduce 100% green hydrogen via the existing gas network. As an interim, the UK is assessing the potential for introducing hydrogen into the existing gas network as a blend at 20% volume to deliver a safer, greener gas alternative that reduces carbon emissions.

Adveco's current ranges of high efficiency, ultra-low emission gas-fired condensing water heater, the instantaneous ADplus and semi-instantaneous AD, as well as the MD boiler range, are all hydrogen 20% blend ready and able to burn natural gas with a blend of up to 20% hydrogen without requiring any modification. That gives you peace of mind when investing in gas-fired water heating applications.

HYDROGEN

What is Hydrogen?

Hydrogen is a gas which can be used as a source of energy

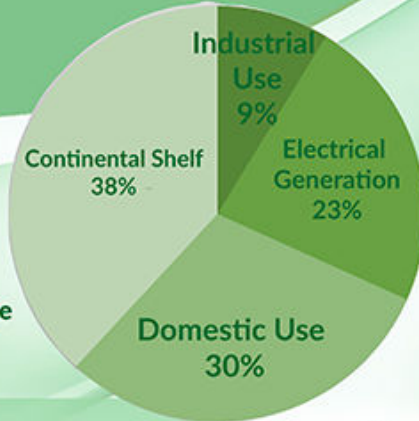


What does hydrogen ready mean?

It has been proven that all gas appliances can take a 20% blend without alteration – this is not what Hydrogen ready means. Hydrogen ready means it can be converted to 100% hydrogen.

What is the gas grid?

The gas grid is a national set of pipes that link gas generation sites to consumers.



The conversion can mean remove entire inner from outer box and replace.

Burner differences for Hydrogen burning

- Flame speed
- Flame proving
- Pre mix method

These are not major changes

What is Blue vs Green hydrogen?

Blue Hydrogen produced by steam methane (nat gas) reforming. It requires a lot of heat, but the CO2 can be captured making it carbon-neutral

Green Hydrogen uses electrolysis to split water but requires electricity – if it is carbon free electricity then it is carbon neutral Hydrogen.



Why use it?

It is a cleaner alternative to natural gas or methane as there are no carbon emissions when burnt and potentially more sustainable



How is made and used as a fuel?

Hydrogen can be produced in many ways including splitting from natural gas, electrolysis from water, biomass fermentation or splitting from other liquids such as ethanol. Hydrogen can be used by either burning it or passing it through a fuel cell.

Is it more dangerous?

- Hydrogen disperses more quickly in well ventilated spaces, so is a safe natural gas replacement
- Hydrogen exhaust is only water vapour, no CO
- Hydrogen is non toxic
- Hydrogen has higher flammability rates than natural gas
- However, both are flammable at about 4-5% volume in air



What's next?

- 20% blend in 2024
- Decision on hydrogen future in 2026
- All boilers to be Hydrogen ready by 2026
- Grid changeover beginning in 2030-35

HYDROGEN FUTURE

20% HYDROGEN BLEND

Disaster Recovery

True crisis response for domestic hot water (DHW) systems should be a rarity. Most refurbishments for commercial properties are well-planned. Regular annual maintenance ensures consistent operational service and helps avoid appliance failures, but should that occur, backup systems are in place to guarantee demands continue to be met whilst repairs or replacement takes place.



There are however rare occasions when a property is impacted by an event that can have large-scale implications on the building's services which demand a crisis response. In September 2022, Adveco's engineers were called in to assess flood damage to a customer's DHW system. It became rapidly clear that the entire plant room would be unrecoverable. With the insurance claim being processed, the customer requested a like-for-like replacement.

Adveco put an immediate crisis response into place, reassessing the building's DHW demands, and proposing a modernised system designed around Adveco's ADplus water heaters that would improve efficiency, be more resilient to the corrosive nature of soft water, offer greater built-in redundancy and would easily integrate into the building's BMS system.

[READ THE CASES STUDY](#)

Staying With Gas Or Moving To Electricity



AD plus

The the ADplus & AD ranges of high power gas-fired condensing water heaters are all 20% hydrogen blend ready without the need for any modification for commercial DHW or heating projects. This provides a



ARDENT Electric Boiler

ARDENT is designed to serve as an indirect water heater or heating system. Wall-hung and floor-standing variants for those seeking to avoid a reliance on gas energy supplies. In hard water areas the



Air Source Heat Pumps

The FPI32 & L70 ranges of commercial Air Source Heat Pumps (ASHP) for the provision of preheat in domestic hot water applications. Adveco ASHPs can be supplied as a part of a bespoke hybrid, or all-

practical choice today, especially for ARDENT electric boiler can be used refurbishment projects, while future to dramatically reduce the costly proofing systems in advance of a build up of damaging limescale. greener gas grid.

electric system, as well as an element of a prefabricated plant room system.

FIND OUT MORE

FIND OUT MORE

FIND OUT MORE

Adveco 2023 Product Guide

Fully updated for 2023, this useful reference guide provides a full summary of Adveco's current product portfolio. Don't forget these are just the start of our offering, acting as the buildings blocks for your bespoke hot water systems...

2023 PRODUCT GUIDE



Discover Adveco's expanding range of low carbon and renewable products

- [FPI R32 monobloc Air Source Heat Pump](#)
- [L70 Air Source Heat Pumps for larger projects](#)
- [FUSION pre-sized hybrid hot water systems](#)
- [Solar Thermal Drainback Systems](#)
- [ARDENT Electric Boilers](#)
- [Hot Water Cylinders, Indirect Water Heaters, Calorifiers & Buffers](#)
- [Commercial Gas-Fired Water Heaters](#)
- [Standalone Heat Recovery from Chillers](#)
- [Offsite Constructed Packaged Plant Rooms](#)



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