



Welcome to Adveco's December newsletter,

This month, Adveco considers the advantages of off-site constructed systems (OSCS), where the entire water heating plant is built, plumbed, and wired within a controlled factory environment. We also look at the latest example of how this approach can be applied to sink and washbasin-driven systems for commercial properties seeking to reduce carbon emissions from daily operations.

We also conclude our research into the UK's commercial water heating market, establishing the baseline against which all future decarbonisation efforts will be measured. We analyse the profound impact of past, current, and planned legislation on the commercial water heating market, key policy changes and future market inflection points, and barriers to commercial adoption of sustainable water heating. We then look forward to plausible future scenarios and technological pathways and consider what is still required to take UK commercial water heating to net-zero status by 2050.

And may we take the opportunity to wish you the very best for the Christmas season...

Adveco will close for the holidays at 1.30 pm on 24th December and will reopen on Monday, 5th January at 8.30 am. For emergency call-outs, please refer to the contact us page on the website.

## **Box Clever - Offsite Constructed Low Carbon Hot Water Systems**



The implementation of complex plant equipment, such as high-capacity and business-critical systems required for domestic hot water (DHW) applications in commercial buildings, is inherently

challenging on an active building site. Offsite constructed systems (OSCS), where the entire water heating plant is built, plumbed, and wired within a controlled factory environment, provide a powerful response, offering gains in quality, efficiency, and safety.

The factory environment eliminates many of the unpredictable variables that plague onsite construction, such as adverse weather, inconsistent lighting, and scheduling pressure. This controlled setting allows for higher quality assurance and tighter tolerances during assembly, welding, and wiring. With access to tools and standardised procedures, technicians deliver ready-to-install systems faster, with fewer defects and higher build quality. Furthermore, the complete system can undergo Factory Acceptance Testing (FAT) before shipment. This vital step ensures that all pumps, valves, and control systems function correctly and integrate seamlessly under load, drastically reducing debugging time and risk on the final site.

Time is money, especially for commercial properties where operational downtime is costly. OSCS dramatically reduces the time spent on installation. The construction of the mechanical plant room can occur simultaneously with the construction of the building itself. Instead of weeks or months of complex pipe fitting and electrical work on site, the modular unit—which contains the complete hot water application—is delivered as a complete ‘plug-and-play’ module. It is lifted into place and requires only final connections to the building’s main services (water, power, and distribution loops). This parallel workflow can shave weeks off the construction schedule, accelerating the launch of a new build property or reopening of a renovated structure. It also allows for greater choice when locating plant functions, as the structure can be located externally. This also helps to free up valuable internal space within the building.

Moving the bulk of the installation work offsite also results in a safer construction process. It significantly reduces the number of tradespeople required to work in confined, potentially hazardous, plant room spaces. Fewer personnel working at heights or handling heavy equipment in a congested area lowers the risk of accidents and improves overall site organisation. As the OSCS is delivered at the moment of requirement in the build, there are no issues with long-term on-site storage, often a source of expensive damage on busy sites, which can also seriously impact project delivery timelines. This is just one of the ways offsite construction offers greater cost predictability. Labour costs are fixed in the controlled factory setting, avoiding the unpredictable escalation of site labour, which can be affected by weather delays or delivery issues. This predictable budgeting, combined with the decreased time on site, makes OSCS a compelling economic argument for high-demand, mission-critical applications like commercial water heating.

### **What's In A Box?**

At Adveco, by far the most popular choice of OSCS is a compact plant for the delivery of basin and sink-led DHW demands. These are notably selected by restaurants, smaller schools, and general practice healthcare centres, but increasingly now also offices transforming into multi-rental or mixed-use spaces where the versatility of the approach and low-carbon system design ticks several boxes in terms of sustainability planning and, if necessary, independent system delivery on a floor-by-floor, or renter-by-renter basis.

The Adveco PPR0008 takes the award-winning FUSION hybrid water heating concept and applies it to deliver the most compact, reliable and low-carbon electric hot water OSCS. Within a 2.8×1.2×1.4 m weatherproof GRP house sits a system comprising a pair of **ATSI** 210-litre hot water calorifiers. Each hot water cylinder, constructed from robust stainless steel and containing a single 1.4m<sup>2</sup> low-level indirect heating coil, is connected to an electric heat source. The two tanks are connected in series in a preheater-after-heater arrangement. An **ADVS-W** air source heat pump (ASHP) is mounted externally to the GRP house, providing through maximised efficiency low-grade renewable heat into the coil of the preheat tank. The air source heat pump provides 9.50 kW of heat input at

7°C outdoor temperatures and 6.95 kW at -7°C outdoor temperatures. The ASHP uses low-GWP refrigerant to minimise the environmental impact of the installation while extracting ambient heat from the outdoor air to preheat the incoming cold mains water in the preheat tank to approximately 50°C. With 420 litres of storage and allowing for the lower, slower reheating from the ASHP, recovery time is still just an hour, even during peak periods of demand.

An **ARDENT Electric Boiler** connects to the coil of the after-heater tank to provide up to 12 kW of high-grade heat to bring the water in the hot water tank up to the desired use and storage temperature. The electric boiler uses the sealed primary loop to greatly reduce the common issues of element wear and limescale build-up in the hot water tank. The after-heater tank is additionally fitted with a reserve 6 kW direct electric immersion heater to serve as a backup heat source for system redundancy.

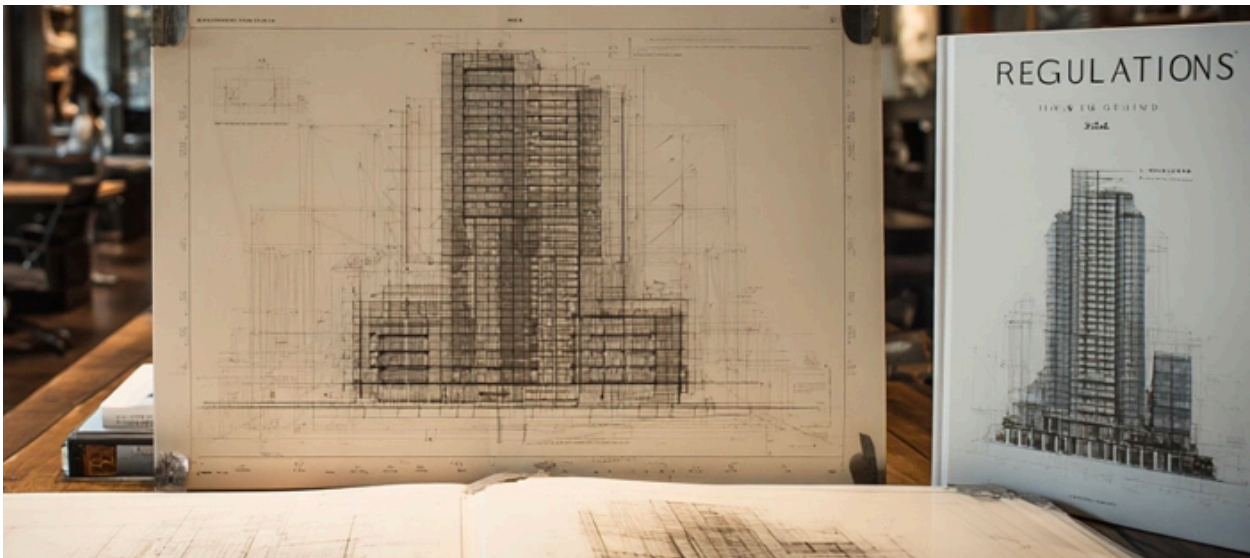
The completed system is supplied pre-fitted, complete with all internal pipework, including lagging, unvented system equipment, pumps, valves, gauges, controls, and internal mechanical and electrical connections. The system also features a wall-mounted control panel to provide power and switching to the installation, ensuring a seamless integration of all components, as well as a GSM-based fault output system to alert building and maintenance services in the event of a primary appliance fault. In such an eventuality, the panel will additionally and automatically activate the backup direct electric immersion heater in the after-heater tank, providing a reserve level of hot water to prevent the system from running cold. Twice per week, a time clock connected to a destratification pump will sterilise the entire system as a method of automated legionella prevention.

On delivery, all that needs to be done is for the installer to connect external electrical and plumbing connections between the building and plant. For legacy public sector buildings requiring renovation and decarbonisation, OSCS provide a valuable alternative which is not tied down by the limitations of existing plant room space or location. The versatility the approach brings to any refurbishment or new build project should be given serious consideration at the earliest stages of planned development to maximise opportunities and lower overall project costs.

#### OSCS HOT WATER PLANT ROOMS

## Water Heating In The UK

*Adveco concludes its latest research, providing an overview of the UK's commercial water heating market, establishing the baseline against which all future decarbonisation efforts will be measured...*



## **Legislation and Regulations**

### **Historic and Current Policy Framework**

Government policy has historically been the primary catalyst for change in the UK heating market. The Non-Domestic Renewable Heat Incentive (NDRHI), which closed to new applicants in March 2021, provided long-term, output-based financial support to businesses installing renewable technologies for space, water, and industrial process heating. <sup>23</sup> The scheme made large-scale renewable projects bankable by providing predictable, long-term revenue streams over 20 years. <sup>23</sup> Its closure marks a significant shift away from this model.

The Boiler Upgrade Scheme (BUS), which provides upfront grants of up to £7,500 for ASHP and GSHP installations, is primarily targeted at the domestic market but is also available to "small non-domestic buildings".<sup>4</sup> This has created a new, albeit limited, market segment eligible for direct financial support. However, this one-off capital grant model lacks the long-term financial certainty that was a hallmark of the NDRHI, which may have created a policy vacuum for large-scale commercial and industrial players who require predictable, long-term returns on their significant capital investments. The overarching policy is the Net Zero Strategy, which commits the UK to a 100% reduction in greenhouse gas emissions by 2050 from a 1990 baseline, following a recommendation from the Climate Change Committee (CCC).<sup>33</sup>

### **The Boiler Upgrade Scheme (BUS)**

The Boiler Upgrade Scheme (BUS) is a cornerstone of the UK government's current strategy to decarbonise heat. Launched in May 2022 and scheduled to run until the end of 2027, the scheme provides upfront capital grants to property owners in England and Wales.<sup>34</sup> The grants offer £7,500 towards the cost of an air or ground source heat pump and £5,000 for a biomass boiler. <sup>34</sup> Crucially, the scheme is open to "small and medium non-domestic buildings" with an installation capacity of up to 45 kW, covering the vast majority of such properties. <sup>34</sup>

The design of the BUS, particularly its "installer-led" application process, has been a significant factor in its success. This approach minimises the administrative burden on property owners, with the installer responsible for applying for the grant and discounting its value from the customer's invoice. <sup>34</sup> Industry representatives have hailed the scheme as a "real catalyst" that has stimulated

homeowner interest and driven a surge in grant applications.<sup>35</sup> For example, applications to the BUS in August 2024 more than doubled compared to August 2023.<sup>35</sup> The scheme is part of a broader package of policies designed to scale up heat pump deployment and reduce costs.<sup>34</sup>

### ***The Legacy of the Non-Domestic Renewable Heat Incentive (NDRHI)***

The Boiler Upgrade Scheme replaced the long-standing Non-Domestic Renewable Heat Incentive (NDRHI), which closed to new applicants in Great Britain on March 31, 2021, with all pathways to accreditation ending by March 2023.<sup>36</sup> The NDRHI operated on a different model, providing quarterly payments for up to 20 years based on the amount of heat a system generated.<sup>37</sup>

From its launch in 2011 to its closure, the NDRHI accredited 22,703 installations and made total support payments of £6.95 billion, with annual payments surpassing £1 billion for the first time in the year to March 2025.<sup>38</sup> The scheme's legacy is defined by a notable technology preference, with solid biomass boilers and ground source heat pumps accounting for 77% and 12% of all accredited installations, respectively.<sup>38</sup> The long-term, output-based payment structure of the NDRHI provided a strong business case for technologies with a predictable energy yield, leading to what some critics described as an "excessive focus on biomass".<sup>39</sup> This is a clear demonstration of how different policy designs can directly influence market outcomes. The shift from a long-term revenue scheme to an upfront grant in the BUS has successfully steered market preference towards heat pumps by de-risking the high initial capital cost, which was a major barrier to adoption.<sup>34</sup>

### ***The Energy Performance of Buildings Directive (EPBD): Influences From Europe***

The Energy Performance of Buildings Directive (EPBD) is the European Union's primary legislative tool for improving the energy efficiency of buildings and reducing greenhouse gas emissions. First introduced in 2002 and revised multiple times, its main objective is to move the building stock towards a zero-emission standard by 2050. The most recent revision, adopted in May 2024, introduces stricter targets and new measures to align with the EU's climate goals. Following Brexit, the UK is no longer legally bound by the EPBD. However, the directive's principles have been influential and are reflected in the UK's own domestic policies, such as the Energy Performance of Buildings (England and Wales) Regulations 2012, which consolidate previous EU directives.

The EPBD aims to make all new buildings zero-emission by 2030, with new public buildings meeting this standard by 2028. This means buildings must have a very low energy demand and produce zero on-site emissions from fossil fuels. The EPBD emphasises a "renovation wave" to upgrade the existing building stock. It requires member states to create national renovation plans with targets for reducing energy consumption and phasing out fossil fuel boilers. There is also a push for a gradual rollout of solar energy installations on buildings.

To achieve this the EPBD mandates Minimum Energy Performance Standards (MEPS) for non-residential buildings, requiring the worst-performing buildings to be renovated. By 2030, all non-residential buildings must be above the 16% worst-performing buildings, and by 2033, they must be above the 26% worst-performing ones. Although not directly adopting the new EPBD, the UK's own regulations continue to evolve, often mirroring the EU's direction and ambition.

### ***The Future Buildings Standard (2025): A Market Inflection Point***

The most significant legislative driver for the commercial water heating market is the upcoming Future Buildings Standard (FBS). This standard, coming into effect in 2025, will prohibit the

installation of fossil fuel heating systems in all new non-domestic buildings.<sup>2</sup> This is a profound move that eliminates the choice of incumbent technologies, creating a 100% low-carbon market for new construction. The policy explicitly states that gas, hybrid, and hydrogen-ready boilers will not meet the proposed standards.<sup>2</sup>

The future of commercial decarbonisation is set to be profoundly influenced by the forthcoming Future Homes and Buildings Standards. These standards, which will mandate low-carbon heating in all new build homes and non-domestic buildings, will make heat pumps the default choice from 2027 onwards.<sup>22</sup> The government's commitment is to ensure that new properties are "zero-carbon ready" and will not require retrofitting as the electricity grid decarbonises.<sup>40</sup> This policy is expected to be a major market driver, building on the already observed trend of a dramatic rise in the number of renewable installations on new-build properties.<sup>41</sup> In the first half of 2025, installations on new builds accounted for 28% of the total, a significant increase from 21% in the same period a year prior.<sup>41</sup> The introduction of this standard will provide long-term regulatory certainty for the sector and create a consistent pipeline of projects, which is essential for scaling up the supply chain and workforce.

The standard proposes that all space and water heating demands in new builds be met by low-carbon sources, with notional buildings designed around the use of an air source heat pump or a 4th generation heat network.<sup>2</sup> The FBS is not merely a regulatory update; it is a forced market transformation for the new-build segment. It provides a clear, stable signal to manufacturers and installers to invest in the supply chain for heat pumps, heat networks, and related technologies, addressing the workforce and supply chain issues that have been noted as barriers to adoption. The FBS thus acts as a market-building mechanism, providing the entire supply chain with the confidence to invest in manufacturing and training, which in turn will help to strengthen the supply chain to support low-carbon approaches.



## **Market Drivers**

The recent surge in commercial adoption of low-carbon technologies is a result of several powerful, interconnected drivers. The most direct catalyst has been policy and regulatory clarity. Planning reforms introduced in 2024 simplified the process for installing external heat pump units, removing a key source of uncertainty for property owners.<sup>42</sup> This was coupled with financial support from the

Boiler Upgrade Scheme and the Industrial Energy Transformation Fund, which have been instrumental in helping businesses overcome the high upfront capital costs of these systems.<sup>34</sup>

Economic factors are also a primary motivator. The volatility of energy costs has made long-term efficiency a top priority for businesses, and heat pumps offer a compelling value proposition. A heat pump can deliver a seasonal efficiency (SCOP) of 280-320%, providing nearly three units of heat for every unit of electricity, a stark contrast to a conventional gas boiler's efficiency of 85-90%.<sup>42</sup> This translates into lower running costs and substantial long-term savings. Furthermore, corporate sustainability objectives and environmental, social, and governance (ESG) targets are increasingly non-negotiable for organisations. Installing these technologies allows businesses to meet their emissions reduction targets and showcase a visible commitment to sustainability.<sup>42</sup>

### **Persistent Barriers**

Despite the positive momentum, significant barriers continue to impede widespread commercial adoption. The high upfront cost of a heat pump installation remains a major hurdle. Even with the £7,500 government grant, the cost of commercial air source heat pumps in the UK varies significantly, ranging from around £5,000 to over £20,000 per kilowatt (kW) of heating capacity. For small to medium-sized commercial spaces, the total installed cost typically falls between £6,000 and £18,000. However, for larger systems or complex installations, the price can scale well beyond this range, especially when multiple units are required.<sup>43</sup> This capital outlay, coupled with a general lack of business awareness, means that many commercial entities are not fully exploring these options.

Another critical bottleneck is the shortage of a skilled workforce. A survey found that only 31% of heating engineers were currently installing heat pumps, and a lack of skilled installers was cited as a key barrier to uptake.<sup>44</sup> While the number of individuals completing a heat pump training qualification increased by 15% in 2024, this growth rate is not sufficient to meet the government's target of 600,000 installations per year by 2028.<sup>45</sup> This supply-side constraint means that businesses are often not presented with renewable heating solutions when their existing fossil fuel boiler breaks down, and they instead opt for a quick like-for-like replacement.<sup>39</sup> Skilled installation is also a critical safety issue as hot water systems remain complex and challenging. The industry has a long history of certification for gas safety protocols, but this has not yet extended to potentially explosive refrigerants (such as R290) deployed in the latest generation high-temperature heat pumps and concerns over the electrical connection of PV systems, which have the potential for ignition of fire.<sup>24</sup>

To mitigate these risks, stringent safety measures and regulations are crucial. Installation and maintenance of R290 heat pumps and solar PV must be carried out only by highly trained and certified professionals who understand the specific handling requirements of these technologies. Addressing this skills gap is paramount to ensuring the continued and safe accelerated growth of the market.

### **Baseline Scenario: Market Evolution by Current Momentum**

This scenario assumes a continuation of current trends without any significant acceleration of policy or market forces. The key assumption is that the existing replacement cycle for gas boilers continues to dominate, with condensing models entrenching the fossil fuel infrastructure.<sup>1</sup> ASHP adoption would continue to grow at its current pace but would remain a niche solution for a specific segment of early adopters. The projected outcome is that the market would fall far short of the government's ambitions. The UK's target of 600,000 heat pumps per year by 2028 would not be met

[3](#), and the 2035 phase-out target for gas boilers would likely require significant, disruptive, and costly retrofits to meet the 2050 net-zero goal.[45](#) This scenario demonstrates the inadequacy of a purely market-led transition. The inertia of the installed gas boiler space is so significant that organic change, even with current incentives, will not be sufficient to meet the UK's legal carbon budgets.

### **Accelerated Electrification Scenario: High Heat Pump and Heat Network Adoption**

This scenario models the market's trajectory if the government successfully implements its stated policy ambitions. The key assumptions are that the Future Buildings Standard is successfully implemented, creating a 100% low-carbon new-build market.[30](#) The 600,000 heat pump target by 2028 is met, and the market continues to grow towards 1.9 million installations per year by 2035.[3](#)

Concurrently, there is a significant expansion of heat networks, growing from 2% to 18% of the heat supply by 2050.[29](#) The success of this scenario is entirely dependent on policy execution and public/commercial acceptance. The causal relationship is that the Future Buildings Standard creates a guaranteed market, which in turn signals to the supply chain (e.g., manufacturers, installers) to invest and scale up. This scaling then drives down costs, making heat pumps more competitive and accelerating their adoption in the retrofit market. [30](#) This would significantly reduce the sector's reliance on natural gas and align the UK with its 2050 net-zero target. The decarbonisation of the electricity grid is a crucial prerequisite for this to be a true decarbonisation pathway. [3](#)

### **The Role of Hydrogen and Hybrid Systems**

This third scenario explores a potential alternative pathway and its implications. The key assumption is that hydrogen is successfully trialled and proves to be a viable, safe, and cost-effective alternative to natural gas.[4](#) Infrastructure challenges are overcome, allowing existing gas grids to be repurposed. This would provide a viable decarbonisation pathway for hard-to-decarbonise commercial and industrial sectors, particularly those that require high-temperature process heat that is not easily provided by heat pumps. The ongoing debate about hydrogen is a major source of market uncertainty, as a delayed or negative decision on its role could create significant policy risk. The most likely future, however, is a hybrid approach, where each technology addresses its specific, high-value application, rather than a single technology replacing all others.[32](#) For example, hydrogen could be a transitional fuel for "harder-to-decarbonise sectors," while heat pumps become the standard for the vast majority of other applications. [32](#)



## Key Insights



This report reveals a commercial heating market in a state of controlled disruption, where deep-seated incumbent technologies coexist with rapidly growing, but still nascent, low-carbon alternatives. The market's heavy reliance on gas is a function of established infrastructure and a high-volume replacement cycle.<sup>1</sup> This inertia is so significant that organic change is insufficient to meet decarbonisation targets. The market's future will be defined by policy. The Future Buildings Standard is a profound inflection point that will mandate the use of low-carbon technologies in new builds from 2025, providing a clear signal for investment and supply chain scaling.<sup>30</sup>

The high percentage growth of ASHPs masks a vast disparity in the installed base, demonstrating the immense scale of the decarbonisation challenge. The decline of solar thermal in favour of solar PV highlights a broader trend of market forces favouring versatile, multi-application technologies.<sup>9</sup> The most credible pathway to net zero involves a hybrid approach, where heat pumps and heat networks serve as the primary low-carbon solutions for most commercial properties, while specialised technologies like industrial waste heat recovery and hydrogen address unique commercial and heavier industrial demands.<sup>32</sup>

### Recommendations For Commercial Property Owners & Developers

Prioritise long-term value over short-term savings. The 2025 ban on fossil fuels in new builds makes heat pumps and heat networks the only viable option for future-proofing assets.<sup>30</sup> For existing stock, an energy audit is the most critical first step. Building fabric upgrades for space heating are necessary to ensure heat pump efficiency, but not in applications for hot water.<sup>5</sup>

**- Leverage Existing Support:** Businesses should actively engage with and apply for grants from the Boiler Upgrade Scheme and the Industrial Energy Transformation Fund where eligible. These schemes are designed to reduce the high initial capital expenditure that is a primary barrier to adoption.<sup>34</sup>

**- Plan Strategically:** The performance of heat pumps for hot water, unlike space heating, is not directly linked to a building's energy efficiency. Prior to installation, businesses are not required to invest in "fabric first" measures such as improved insulation to reduce overall energy demand. Hybrid system approaches, as opposed to building insulation, will maximise the efficiency and performance of the heat pump, allowing for the installation of a smaller, less expensive system. This allows for greater versatility in planning, and quick, low-cost-of-entry, sustainability gains for the built estate.<sup>40</sup>

**- Assess Total Cost of Ownership:** The decision to switch should be based on a comprehensive analysis of the total cost of ownership, looking beyond the initial installation price. Long-term running costs and maintenance savings, combined with the potential for revenue generation from solar technologies and the ability to meet ESG objectives, can provide a compelling and robust return on investment.<sup>4</sup>

### Recommendations For Government & Policymakers

To bridge the gap for the existing building stock, introduce long-term, stable financial mechanisms that provide the financial certainty needed for large-scale commercial investments, perhaps a successor to the NDRHI. A prompt and final decision on the role of hydrogen in heating is essential to reduce market uncertainty and unlock further investment.<sup>45</sup>

- **Expand the Skilled Workforce:** The shortage of trained installers is the single most critical barrier. Policymakers should implement targeted funding for training and apprenticeships, with a focus on upskilling existing gas engineers and providing support to smaller businesses and sole traders to enable them to enter this market.<sup>44</sup>

- **Bridge the Data Gap:** To make informed policy decisions and provide market certainty, government bodies should enhance public data collection. This includes providing granular, specific statistics on non-domestic installations, particularly for solar thermal systems and different commercial sub-sectors.

- **Simplify the Policy Landscape:** The current segmented approach with the BUS for small businesses and the IETF for heavy industry creates a potential "policy gap" for medium-to-large businesses. Consideration should be given to a single, more cohesive framework that supports decarbonisation efforts across all non-domestic property types, ensuring no segment is left without dedicated support.

## Looking Ahead To 2050

The United Kingdom has committed to achieving net-zero greenhouse gas emissions by 2050 and an ambitious 78% reduction on 1990 levels by 2035, a target set out by the Committee on Climate Change (CCC).<sup>47</sup> This legally binding obligation necessitates a fundamental shift in how the nation's buildings are heated and powered. Emissions from non-domestic buildings alone account for approximately 4% of the UK's total greenhouse gas emissions, representing a critical area for focused decarbonisation efforts.<sup>47</sup>

In line with this, a key government policy is the "phasing out of high carbon forms of fossil fuel heating" in new and existing buildings.<sup>48</sup> The UK commercial water heating market is at a pivotal inflection point, characterised by the persistent dominance of incumbent gas-fired systems and a mandated, yet challenging, transition towards sustainable, low-carbon alternatives. As of 2024, gas-fired boilers command a significant 72% share of the broader UK space heating market, with the commercial sector accounting for a substantial 26% of this total, a segment valued at approximately £273 million.<sup>1</sup>

This market position is fortified by a long-established gas grid, consumer familiarity, and lower upfront capital costs compared to newer technologies.<sup>1</sup> The transition, however, is being driven by a powerful legislative agenda. The planned 2025 Future Buildings Standard will fundamentally reshape the new-build segment by prohibiting fossil fuel heating, creating a captive market for low-carbon solutions.<sup>30</sup> This is complemented by the government's long-term ambition to phase out gas boiler installations entirely by 2035 at the latest.<sup>3</sup> In response, the market for air source heat pumps (ASHPs) is experiencing rapid percentage growth, with installations increasing by 40% in 2024.<sup>16</sup>

Despite this momentum—fuelled by government funding such as the Boiler Upgrade Scheme (BUS) and the now-closed Non-Domestic Renewable Heat Incentive (NDRHI)<sup>5</sup>—ASHPs still represent a minuscule fraction of the overall installed base, with annual gas boiler installations outnumbering them by a ratio of roughly 45:1.<sup>17</sup> Concurrently, the solar thermal market has seen a sharp contraction, with installations nearly halving in 2023, diverging sharply from the booming solar photovoltaic (PV) market.<sup>9</sup> Looking to 2050, the market's trajectory will hinge on two primary

scenarios: an 'Accelerated Electrification' pathway, where current government targets are met, and an 'Alternative Fuels' pathway exploring the role of hydrogen and industrial waste heat recovery.

The success of either scenario will depend on overcoming critical barriers, including high upfront costs, the need for extensive building fabric upgrades, and significant policy risks. The ultimate answer will likely be a hybrid approach, with heat pumps and heat networks dominating new builds and retrofits, while hydrogen and waste heat address the harder-to-decarbonise industrial and commercial sectors.

The UK's commercial water heating market is at the dawn of a long but non-negotiable transition. The legislative framework is now in place to force change, and the market for low-carbon alternatives is beginning to scale. The path to 2050 is not linear but will be defined by a series of inflection points, with the Future Buildings Standard being the first. Success will hinge on a collaborative effort to overcome the significant barriers of cost, infrastructure, and public acceptance, but the roadmap is now clear: the future of commercial water heating is overwhelmingly low carbon.

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## Sustainable Hot Water



### FUSION

Advenco's FUSION packaged electric water heaters offer a range of low-carbon, all-electric applications for commercial projects with a wide choice of pre-sized variants



### ADV16-30W ASHPs

The ADV-W air-to-water heat pump range includes 16, 22 & 30kW (3 phase) and 10, 12, & 16kW (single phase) models able to provide hot



### 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

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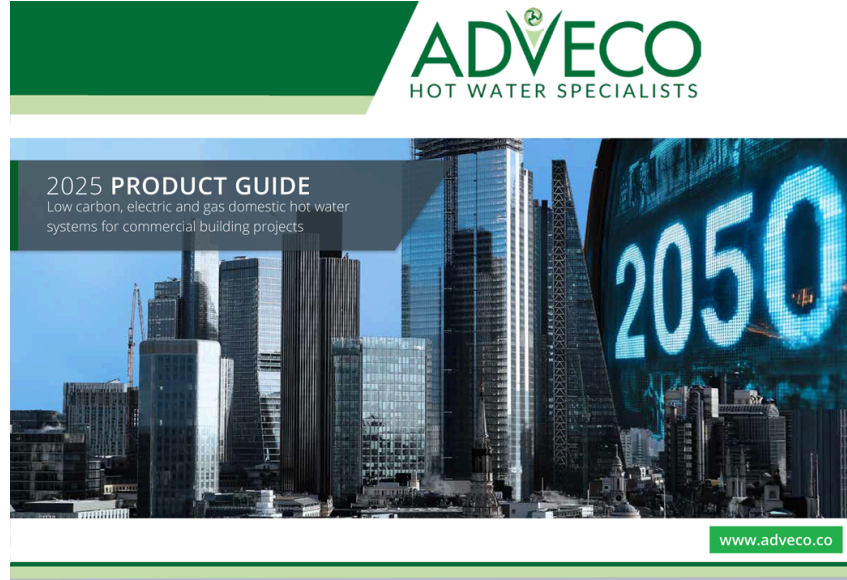
supplies. In hard water areas the ARDENT electric boiler can be used to dramatically reduce the costly build up of damaging limescale.

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## Adveco 2025 Product Guide

Get the handy guide to Adveco's current product range for 2025

**2025 PRODUCT GUIDE**



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