

Decarbonising the Future

Navigating ETS Reforms and Net Zero Solutions

cfp energy

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Tim Atkinson,
Director of
Sales & Structuring,
CFP Energy

Foreword

Increased government ambition, tighter regulations, greater corporate sustainability commitments, and the outcome of the international COP process will demand serious net zero action from large-scale organisations over the next decade and beyond.

In the years leading up to 2050, when the EU, the UK and many others are looking to achieve net zero, new environmental regulations, growth in renewables and reform of flagship emissions trading schemes will have a greater impact on businesses than ever before.

And this change is significantly closer than many think.

For companies covered by the EU Emissions Trading Scheme (ETS) and UK ETS, a paradigm shift is on the horizon.

Significant reform will tighten the cap from now until 2030, reducing free allocations and removing surplus allowances. These changes are forecast to increase future allowance prices and require new abatement technologies to achieve future emissions reduction targets.

ETS operators face a choice on whether to decarbonise, budget for higher carbon prices or use the carbon market to fix future compliance costs.

Whilst abatement projects, and innovation that reduces emissions across all sectors is the ultimate long-term goal, technology and funding availability remain major barriers to more widescale implementation currently.

In the short-term, companies need to make use of market-based mechanisms to manage carbon price risk and begin the transition to net zero. Whether that be the implementation of a purchasing strategy for carbon allowances, contracting green certificates/ PPAs for power or use of alternative biofuels, those companies that act early will be best placed to manage the future net zero challenge.

This report examines the position of companies in key sectors across the UK and Europe, analysing whether organisations are ready for the net zero transition.

We surveyed 500+ large-scale organisations across the aviation, construction, shipping, data centre and manufacturing sectors, to investigate which solutions they are using to meet net zero ambition and also to understand how those impacted by the EU ETS and UK ETS are preparing for the changes to come.

Our findings offer an encouraging view, with respondents showing a good understanding of the different solutions and challenges. The vast majority of respondents also stated they taken steps to plan for higher carbon costs in the future, however, they also highlighted major hurdles to decarbonise such as funding, regulations, technology availability and knowledge.

Overcoming these barriers is a challenge, but it's a necessity for your business, for your industry and for our planet.

All Respondents – Biggest Barriers to Net Zero

#1	#2	#3	#4
Technology Availability	Knowledge	Funding	Regulation

We've authored this report to provide a picture of decarbonisation across the UK and Europe. We built CFP Energy to achieve it.

If you would like to learn how, get in touch.

A Paradigm Shift for European & UK Carbon Markets

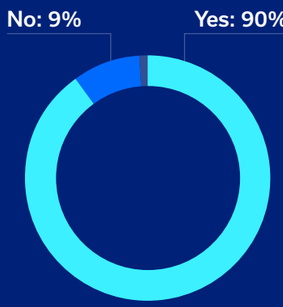
European industries are at the cusp of a transformative shift in carbon market dynamics, one that promises both challenges and opportunities for organisations across key sectors. With impending regulatory changes in EU and UK Emissions Trading Systems (ETS) expected to raise the cost of carbon allowances significantly, companies must be prepared. A failure to strategise could expose businesses to considerable financial risks, while a proactive approach could enable a smoother transition toward net zero targets.

This report draws on data from a comprehensive survey conducted by CFP Energy across large-scale organisations in the UK, Germany, and France. With insights from industries including aviation, data centres, shipping, construction, and manufacturing, the report highlights emerging strategies, investments, and the regulatory pressures driving the need for carbon reduction. The report's findings provide a lens into how companies are navigating both the promise and challenge of carbon markets, with regional insights that reveal varying approaches to decarbonisation.

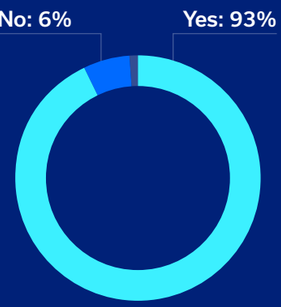
Rising Demand and Strategic Investments in Carbon Compliance

As the demand for carbon allowances is expected to rise—90% of companies surveyed anticipate needing more allowances in the future due to stricter regulations—it's clear that proactive carbon compliance strategies are critical.

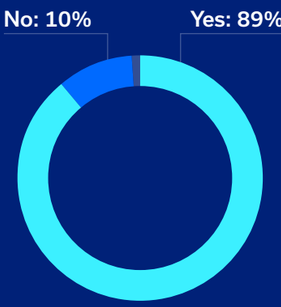
Will carbon allowance demands increase due to new regulations



Have you budgeted for high carbon allowance costs?



Are you mitigating your risk of increased carbon allowance prices?



The report shows that 88% of organisations are already employing futures contracts to mitigate the risk of future allowance price hikes, with the UK leading at 91%, followed by Germany at 90%, and France at 82%. This reliance on futures contracts indicates a shift towards risk management as companies prepare for increased regulatory costs in the near future.

Companies are also increasingly publishing net zero transition plans.

Across all surveyed organisations, 92% have publicly committed to such plans, with the UK showing the highest percentage (95%) of published strategies, closely followed by France (93%) and Germany (89%).

However, achieving these ambitious targets presents a challenge: while 85% of organisations report hitting their interim CO_2 reduction goals, disparities remain, with Germany leading at 90%, the UK at 84%, and France trailing at 81%.

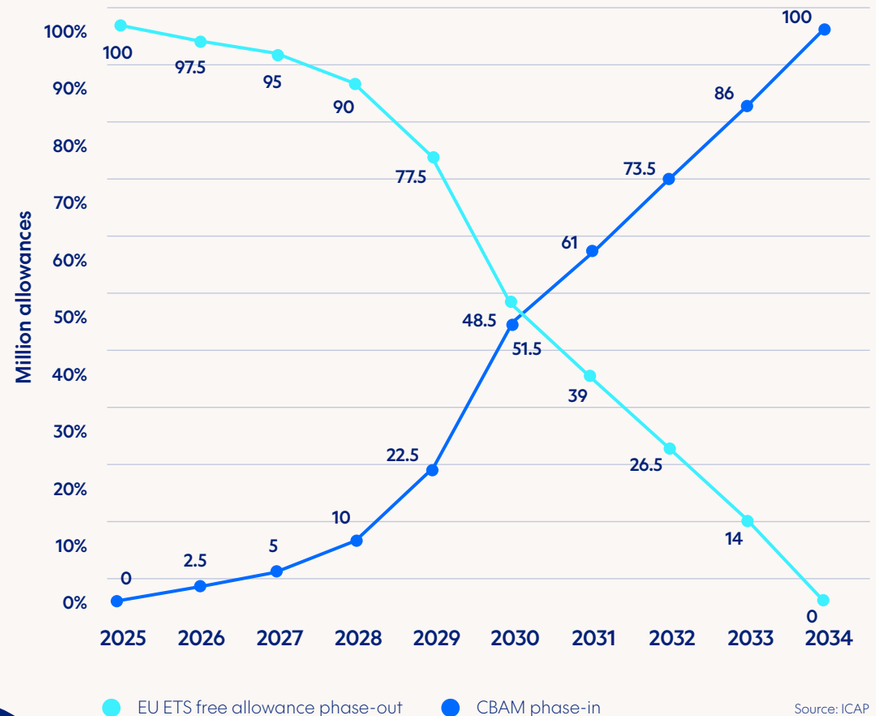
The Regulatory Horizon:

Preparing for Stricter Carbon Standards

The looming ETS regulatory changes will tighten the availability and increase the cost of carbon allowances. With this shift on the horizon, companies in carbon-intensive sectors face an urgent need to adapt.

This report provides an overview of key upcoming regulations across the UK and EU that will shape the decarbonisation landscape. Industry experts stress the importance of long-term compliance strategies that extend beyond mere participation in carbon markets, advocating for resilient, flexible approaches to meet future standards.

EU ETS Free Allowances Phase-Out & CBAM Phase-In



Source: ICAP

EU ETS Expansion

	2024	2025	2026	2027	2028
Shipping	Cargo and passenger ships >5,000t 40% of emissions included for compliance	70% of emissions included for compliance MRV* for offshore vessels >5,000t and ships 400-5,000t	100% of emissions for compliance Compliance for non-CO2 emissions	Inclusion of offshore ships 5,000t	Proposed to cover non-CO2 gases
Aviation	25% cut to free allocations CBAM	25% cut to free allocations CBAM	100% cut to free allocations Review on inclusion of international flights		10% reduction in free allocation
CBAM	Reporting (since Oct 2025) MRV*	CBAM Review	Enters into the forces – 25% reduction in free allocation		
Transport & Building				Separate ETS II for transporting and building emissions	
Waste Sector	Requirements for waste sector				Waste sector to enter ETS

Price Volatility and Compliance Challenges in the EU and UK Carbon Markets

The EU carbon market has seen substantial price volatility, with prices for EU Allowances (EUAs) rising from €30 in 2021 to over €100 in 2023.

Prices have recently fluctuated within a €65-75 range, heavily influenced by renewable energy availability, industrial output, and even macroeconomic trends.

This volatility is exacerbated by speculative investors, making it challenging for operators to predict and control compliance costs.

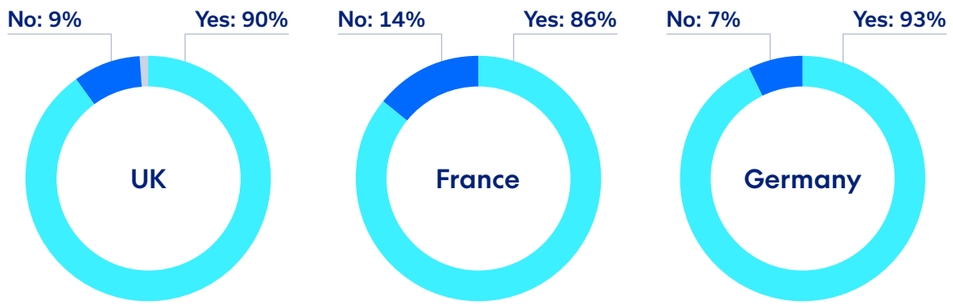
The UK ETS, meanwhile, operates as a smaller, more volatile market with thin trading volumes and sporadic supply from fortnightly auctions.

UK Allowance (UKA) prices often track those in the EU, but with greater sensitivity to domestic factors like the UK's energy mix (gas vs. wind power), causing significant price swings.

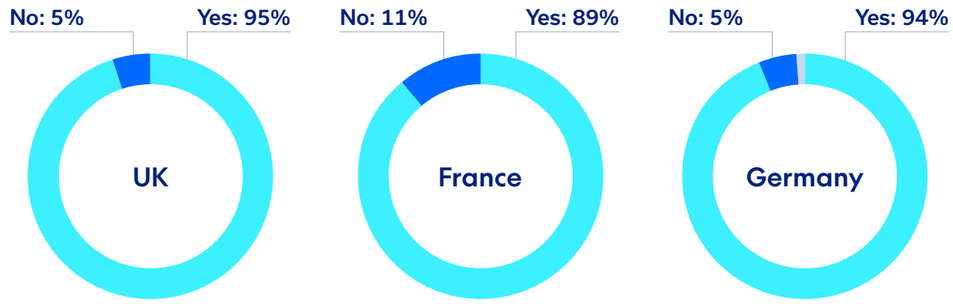
Organisations face a significant challenge to keep up to date with allowance prices, develop a risk management strategy to manage rising compliance costs and execute trades in an increasingly volatile carbon market.

It's clear to see that survey respondents, across Germany, France and the UK, understand that the cost of carbon allowances will increase in the future. They state that budgets have been allocated for this increase in costs. Whether these budgets are high enough is another matter entirely.

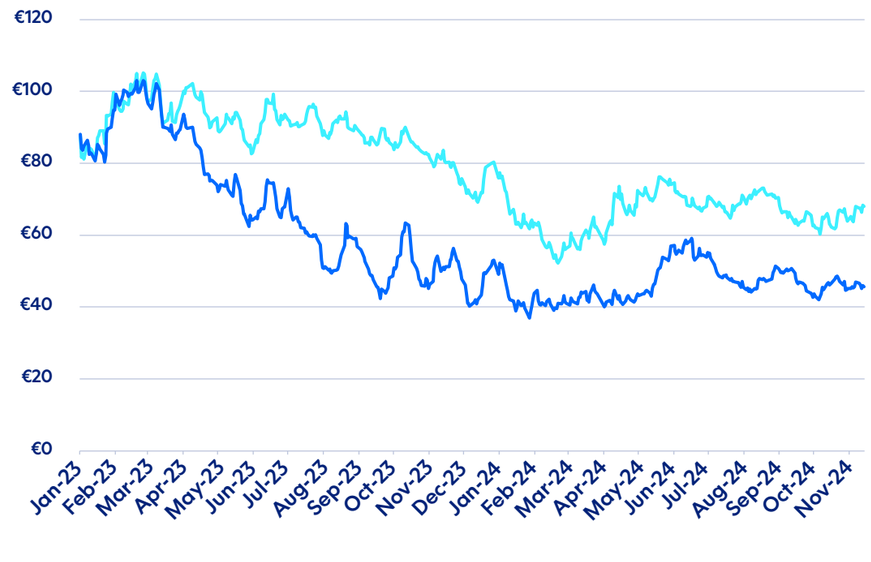
Will your demand for carbon allowances rise in future due to new regulations?



Have you budgeted for higher carbon costs in your financial forecasts?

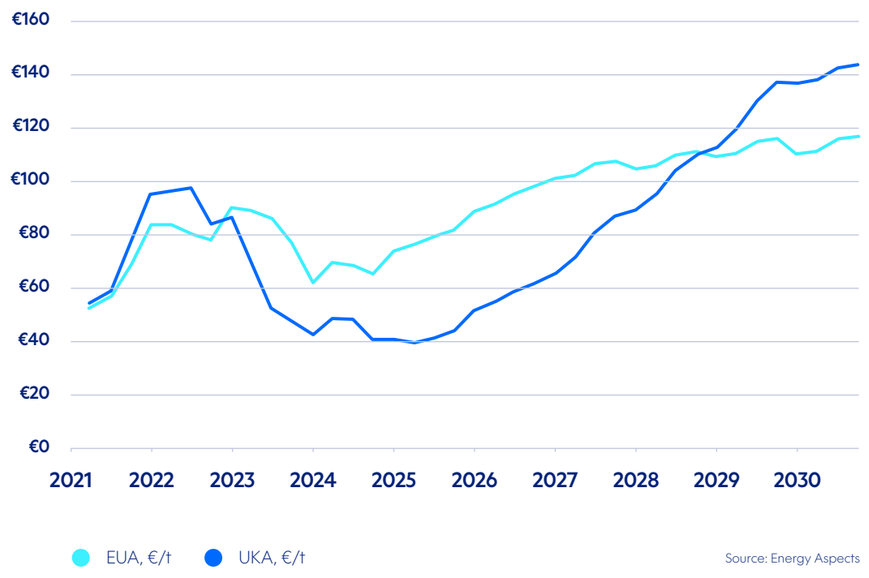


Benchmark EUA & UKA Prices



Source: ICE Exchange Data

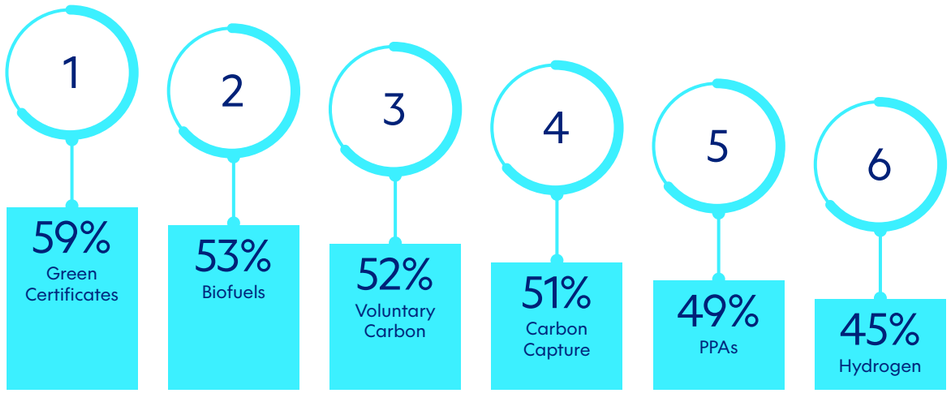
EUA & UKA Priceforecast EA



Source: Energy Aspects

Decarbonisation Requires a Range of Solutions

Survey findings reveal which products and services are most popular amongst large-scale organisations, with distinctive differences between geographies and industries, detailed further in this report.



All Respondents - Approaches to Decarbonisation

United Kingdom

British companies demonstrate a high level of engagement with compliance strategies and are heavily reliant on Green Certificates and PPAs, viewing them as practical solutions to meet emissions standards. While they lead in published transition plans, they are also most impacted by technology availability constraints.

Germany

German companies show the strongest commitment to achieving interim targets and lead in futures contract adoption, indicating a proactive approach to managing future carbon costs. However, funding remains a major barrier, underscoring the financial challenges that may affect Germany's decarbonisation pace.

France

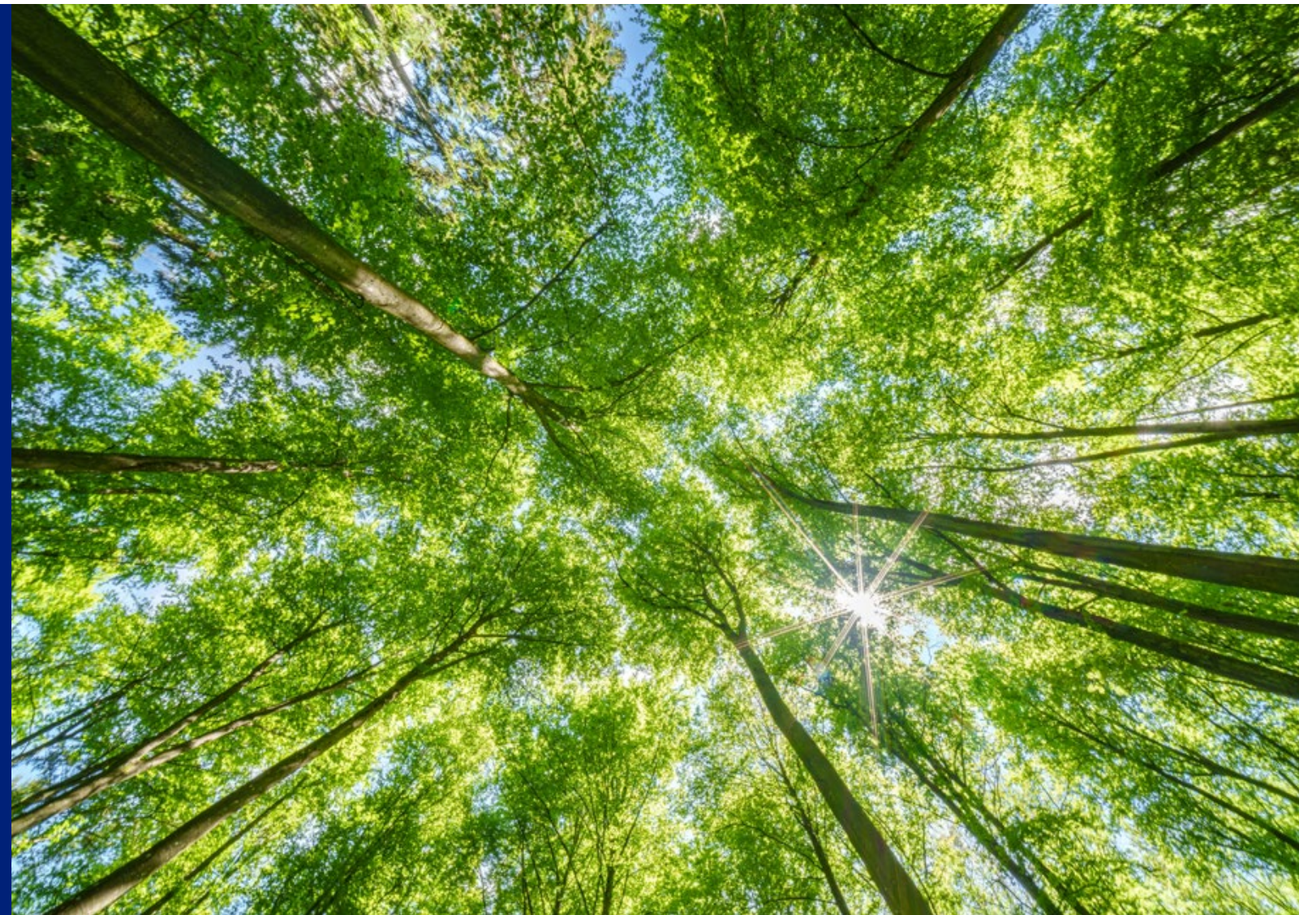
French organisations exhibit the highest adoption rates for biofuels and voluntary carbon offsets. Despite a high commitment to net zero, they face notable barriers in knowledge and funding, reflecting potential needs for targeted resources to achieve ambitious goals.

Paving the Way for Sustainable Business Growth

The findings of this report underscore the need for immediate action as companies prepare for a more restrictive carbon market environment.

Through strategic investments in decarbonisation technologies, improved access to funding, and closing knowledge gaps, businesses can not only adapt to the rising cost of carbon allowances but also position themselves as leaders in sustainable growth.

As the cost of carbon emissions continues to influence business decisions, this report provides essential insights to help organisations navigate carbon markets and the energy transition effectively, align with evolving regulations, and contribute to a more sustainable future.



Aviation

Aviation Industry Faces a New Era of Decarbonisation: Diverging Strategies in the UK, France and Germany

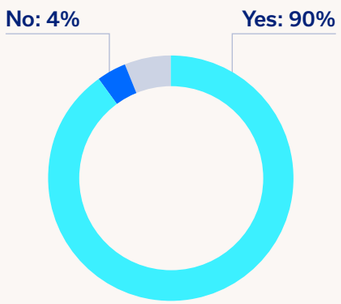
As the aviation industry grapples with the urgent need to reduce carbon emissions, Europe is leading the charge with intensified regulations and ambitious decarbonisation targets for the sector.

At the core of this shift is the EU Emissions Trading Scheme (ETS), which has gradually imposed emissions limits on intra-European flights since 2012. Following Brexit, the UK launched its own ETS, adding a new layer of complexity for airlines navigating both EU and UK regulations.

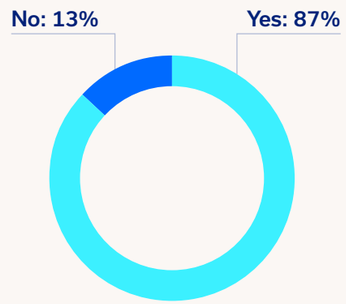
Additionally, individual countries like France and Germany are adopting distinctive approaches to achieve net-zero emissions, creating unique challenges and opportunities for operators in each region.

Net Zero Progress for the Aviation Industry

Have you published a decarbonisation strategy?



Are you hitting your decarbonisaiton & transition targets?



*Some totals do not equal 100% as 'Don't know' option was selected

ETS Reforms and the End of Free Allocations in the EU

The EU's 'Fit for 55' package is driving transformative reforms aimed at reducing carbon emissions across sectors, including aviation. Previously, airlines received up to 82% of their carbon allowances for free, based on 2010 benchmarks.

However, this is changing quickly: by 2026, free allocations will be fully phased out in favor of a full-auction model.

In 2024, airlines will see a 25% reduction in free allowances, followed by 50% in 2025, before they vanish completely by 2026.

The ETS is also tightening its cap on total allowances, doubling the Linear Reduction Factor (LRF) to 4.3% annually through 2027.

The EU is further considering adding non-CO_2 emissions, like nitrous oxides and soot, to ETS obligations by 2027, underscoring the region's comprehensive approach to decarbonisation.

These changes mean that airlines in Europe, especially those in France and Germany, will need to carefully plan to meet ETS obligations amid increasingly limited and costly allowances.





As the aviation industry navigates Phase 1 of CORSIA compliance, demand for eligible carbon credits is increasing rapidly. Airlines face challenges in securing these credits due to constrained supply, complex eligibility criteria, and evolving market dynamics.

Broader market trends highlight significant opportunities as major standards gain approval, enabling early movers to secure high-quality credits under favourable and flexible terms. CFP Energy applies extensive market knowledge to support airlines in navigating these challenges, offering tailored solutions that balance compliance efficiency with financial risk management.

CORSIA is projected to mitigate 1.3 to 1.7 billion tonnes of carbon between 2024 and 2035, playing a pivotal role in aviation's efforts to manage emissions growth. Early action will remain critical as the sector transitions towards long-term decarbonisation goals.

Jaclyn Foss, Business Development Manager, CFP Energy

CORSIA and Global Offsetting Requirements

At a global level, airlines must also comply with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which was introduced by the UN to mitigate emissions from international flights. CORSIA's pilot phase (2021-2023) and the current first phase (2024-2026) are voluntary.

However, offsetting will become mandatory in the second phase (2027-2030), adding another layer of compliance costs as airlines purchase carbon credits to offset emissions.

The EU has extended its "stop-the-clock" mechanism, exempting international flights from ETS obligations until the end of 2026.

However, the EU may review CORSIA's effectiveness in 2026 and potentially require that flights to and from third countries fulfill ETS obligations, adding complexity to compliance for France and Germany, whose airlines may soon face dual obligations under both CORSIA and the EU ETS.

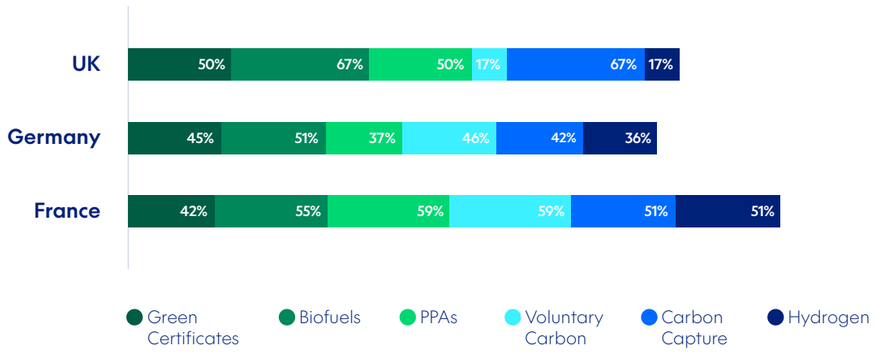




Regional Decarbonisation Strategies: The UK, France, and Germany

While the UK, France, and Germany share a common goal of achieving net-zero emissions, each country has adopted unique approaches shaped by its regulatory environment, technological capabilities, and financial resources.

Solutions used by Aviation Operators to Achieve Decarbonisation



All Respondents - Approaches to Decarbonisation

United Kingdom

The aviation ndustry in the UK signals its reliance on biofuels and carbon capture, showing an emphasis on immediate, established technologies.

The findings show that 67% of UK operators use biofuels and carbon capture as part of their decarbonisation strategy. However, the adoption of hydrogen and voluntary carbon markets remains lower in the UK (at 17%), reflecting a cautious approach to emerging technologies and solutions.

This conservative strategy prioritises compliance with the UK ETS while deferring investment in long-term experimental solutions.

Germany

German operators have adopted a balanced strategy with moderate adoption rates across various decarbonisation technologies. German operators exhibit a cautious attitude toward PPAs (37%) but show commitment to ETS compliance through the use of voluntary carbon markets (46%) and green certificates (45%).

The country's approach balances the immediate needs of compliance with the ETS while maintaining flexibility to adapt to future shifts in regulations and technologies.

France

French aviation operators have taken a proactive stance with widespread adoption of voluntary carbon markets and Power Purchase Agreements (PPAs), with 59% of aviation operators utilising these mechanisms.

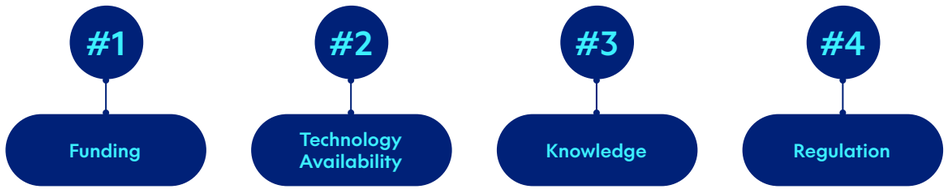
French operators are leveraging renewable energy agreements and market-based offsets, indicating a preference for strategies that yield immediate carbon reduction benefits. This approach allows French airlines to comply with the EU ETS while reducing reliance on speculative carbon allowances, offering a more predictable cost structure in the near term.

Financial and Technological Constraints

As carbon allowance demand rises, funding challenges loom large.

In the UK, where ETS volatility is more pronounced, airlines face a particularly steep financial challenge, compounded by the high upfront costs of deploying biofuels and carbon capture.

Ranked Barriers to Net Zero by Aviation Industry





61%

of aviation operators identify funding limitations as a barrier to decarbonisation, with many struggling to balance compliance costs with investments in green technologies.

Technology constraints are also significant, with 60% of operators across Europe citing insufficient access to viable green technologies.

Hydrogen and biofuels have gained traction, but scalability remains a challenge. Adoption rates for hydrogen vary from 17% in the UK to 42% across the EU, indicating early-stage investment and high costs that limit widespread adoption.

Sustainable Aviation Fuel

One of the fastest growing technologies that is making an impact on the aviation industry is sustainable fuel, which has a significantly lower impact on the environment, as less emissions are created through its use.





The global Sustainable Aviation Fuel (SAF) market is growing rapidly, driven by advancing technologies, declining costs, and strong regulatory backing. The EU, in particular, is setting the pace with ambitious mandates, starting with a 2% blending requirement in 2025, reaching 70% by 2050.

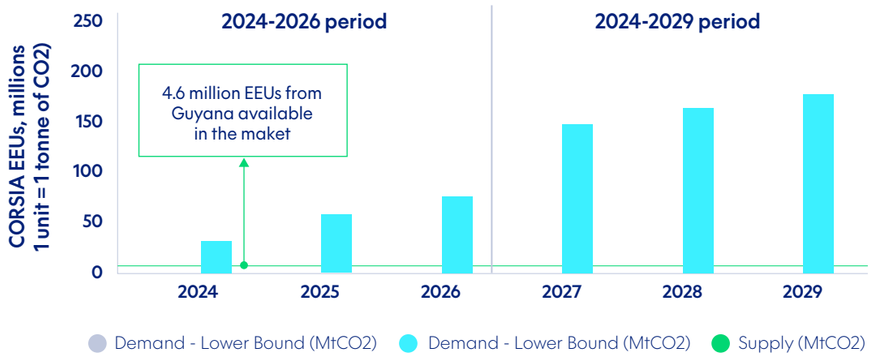
Trading opportunities are expanding beyond physical SAF to include blending credits, voluntary credits, and SAF futures. Challenges persist, such as high entry barriers, price volatility, and the dominance of conventional jet fuel suppliers, but there's ample supply from major producers, and rising voluntary SAF demand from airlines and corporates aiming to surpass mandated levels.

This promising growth is supported by robust infrastructure, ongoing R&D, and the aviation industry's adoption of SAF as central to reaching net-zero goals by 2050.

Bjorn Breckx, Director, CFP Energy

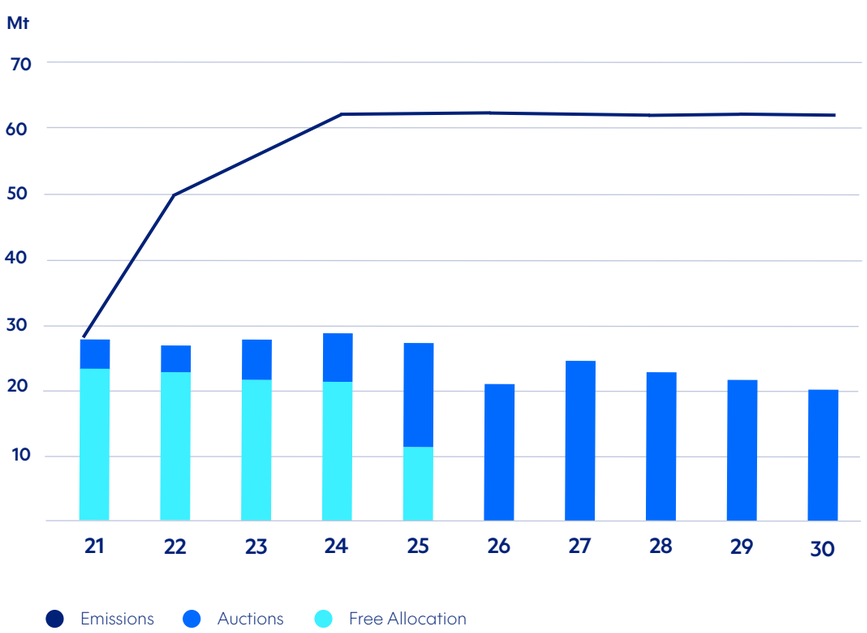
The Future of Carbon Markets for Aviation

Current Supply & Projected Demand for CORSIA Credits



Source: IATA Sustainability and Economics

EU ETS - Aviation Demand-Supply Balance



Allowance supply to aviation sector by auction and free allocation until 2030.

Source: Energy Aspects

Regulatory Complexity and Knowledge Gaps

Complex regulatory frameworks add another layer of difficulty for airlines.

France and Germany are further challenged by evolving EU regulations, which may soon require offsetting non-CO2 emissions.

Meanwhile, UK operators face the dual pressures of UK ETS volatility and the uncertainty of CORSIA's impending requirements.

54%

of operators see knowledge gaps as a hindrance, lacking the expertise to fully leverage available technologies and navigate ETS requirements.

Navigating the Path to Net Zero

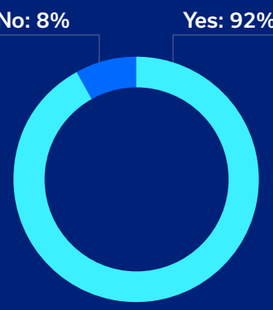
The aviation industry in Europe and the UK is at a critical juncture in its decarbonisation journey.

With rising ETS costs and a complex regulatory environment, airlines must adopt multi-faceted strategies to achieve compliance and advance toward net zero.

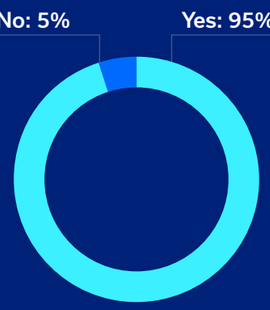
Regional differences in approaches across the UK, France, and Germany underscore the need for flexible, country-specific solutions to meet ETS obligations while managing financial and technological challenges.

Carbon Compliance – Is the Aviation Industry Prepared for Cost Increases?

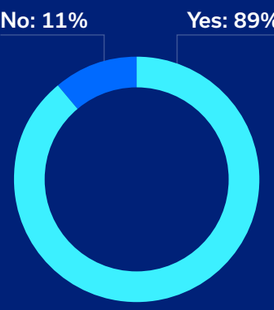
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Data Centres



Data Centre: Big Tech's Biggest Challenge?

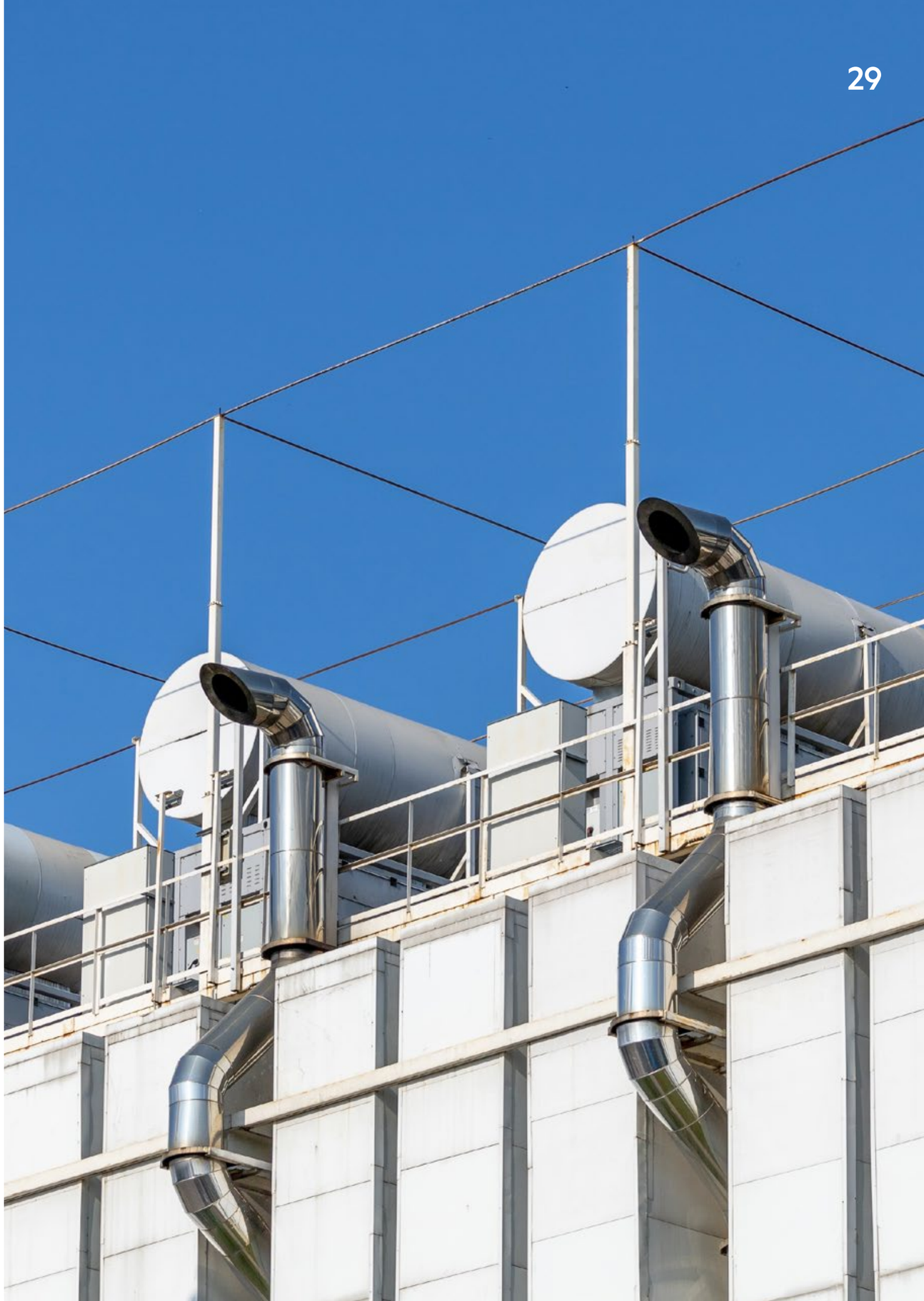
Data centres in Europe face unprecedented challenges in their drive to decarbonise, as soaring demand for data fuels higher energy consumption and emissions. Our survey reveals that with intensifying UK and EU regulations, data centres are adopting a number of solutions to manage decarbonisation.

Operators in the UK, Germany, and France are already contending with varying regulatory and technical pressures, influencing their ability to meet net zero targets, adjust to policies and maintain uptime.

Data centres could have been forgiven for believing their path to decarbonisation and a green future was clear, however, since the rapid adoption and demand for AI technology this is no longer the case.

The energy picture looks murkier than ever for data centres, which must now content with an unexpected and seemingly exponential increase in energy demand as a direct result of AI needing more energy to operate.

AI requires significantly higher volumes of data to function, and each request for data has an energy and carbon cost. So, how do data centres mitigate for this sudden and rapid increase for energy without compromising their long-term sustainability requirements that are demanded by regulators, such as the Energy Efficiency Directive which mandates that data centres must report on wastewater, waste heat, carbon emissions and energy consumption.



Barriers to Decarbonisation

Despite the industry's ambitious net zero goals, several factors hinder progress.

Ranked Barriers to Net Zero by Data Centre Industry



Technology Availability

69% of data centres cite a lack of suitable technology as a significant obstacle, slowing their ability to shift to renewable energy sources or implement energy-efficient systems.

Funding Limitations

High upfront costs prevent many from adopting green technology, with 61% of respondents identifying funding as a barrier.

Regulatory Complexity

With 63% highlighting complex regulations, data centres are burdened with interpreting and complying with evolving policies. This creates administrative challenges, particularly in cross-border operations.

Knowledge Gaps

Decarbonisation expertise is unevenly distributed, affecting smaller data centres' abilities to implement effective carbon strategies.

Technologies and Solutions to Decarbonise

Data centres across Europe are employing diverse technologies to meet net zero targets, with notable variations by country.

Green Certificates

French data centres lead with 71% uptake, while UK and German operators trail at 50% and 60%, respectively. Green Certificates are favoured in France due to strong government incentives for renewable energy.

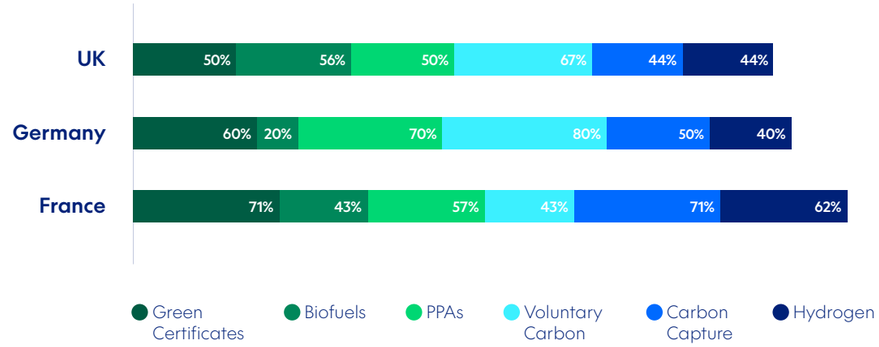
Power Purchase Agreements (PPAs)

German data centres have the greatest uptake PPAs at 70%, followed by French operators at 57%.

Biofuels and Voluntary Carbon Credits

UK operators show a preference for biofuels (56%) and voluntary carbon credits (67%), while Germany has the highest adoption of voluntary credits at 80%.

Solutions used by Data Centre Operators to Achieve Decarbonisation





Legislation Impacting Data Centres - The policy environment for data centres is rapidly evolving

EU Energy Efficiency Directive (EED)

This directive mandates energy audits and efficiency measures, requiring operators to demonstrate continual energy improvements.



European Climate Law

Enforces the EU's climate-neutrality target by 2050, with interim targets mandating emissions reductions across sectors, including high-energy consumers like data centres.

UK's ESOS Phase 3

This scheme enforces energy assessments and reporting requirements, placing additional administrative and operational burdens on UK data centres.

Together, these regulations push data centres toward accelerated emissions reductions, though compliance can be resource-intensive.

Data centres must therefore adapt operational strategies to meet legislative demands while investing in carbon-offsetting mechanisms and clean energy sources to remain competitive.

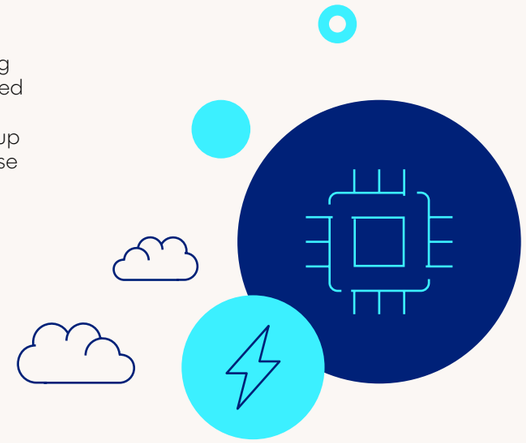
The Challenge of Energy Consumption and AI

The rise of AI and increased digitalisation magnify energy consumption pressures on data centres. High-powered computing operations, such as training large AI models, demand vast amounts of energy, further exacerbating carbon emissions.

The intensive carbon footprint of cloud computing, noting that AI-driven applications will only escalate the demand for real-time data processing and storage.

As more technology, like autonomous vehicles and AI-driven analytics, becomes ubiquitous, data centres will need to manage the dual challenge of maintaining uptime and meeting sustainability targets.

For many operators, this means deploying green energy solutions, improving efficiency through advanced cooling systems, and exploring off-grid or backup power sources that minimise reliance on fossil fuels.





Voice of the Industry
John Booth
Technical Director
National Data Centre Academy

Data Centres are complex, they are in essence a system of systems, all working together to provide digital services to internal and external customers. There is a 100% correlation between electricty and digital services, and this means that the grid needs to be decarbonised for data centres to decarbonise, but there is also the tricky problem of embodied carbon, that is to say the energy used in the construction of data centres and the energy used in the manufacture of all the components in the data centre, from the mechanical and electrical equipment, the associated fire/leak detection and suppression systems and finally the ICT equipment, this is a massive challenge and we have only scraped the surface so far.

The Challenge for Data Centres

In 1987, the United Nations Brundtland Commission defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." I'd argue, quite passonately, that we are failing in this regard, we are using considerable amounts of rare earths and other periodic table elements in ICT and these are very rarely designed to be recoverable for future use, the amount of e-waste is increasing year on year and business models are based on a consumptive approach, who hasn't been pressured into replacing a mobile phone atfter 3 years of use, even when its perfectly serviceable, or had to replace their companies IT estate due to the ending of warranty periods, again when the equipment is still usable. This needs to change, but this I feel would require governments to enforce via legislation.

The EU has a considerable amount of curent and potentially future legislation for data centres which should move the dial and result in more energy efficient and sustainable data centres, but we're a long way from every data centre being energy efficient and sustainable but I am seeing glimmers of light in the darkness.

Tighter Regulations are on the Horizon

Well, firstly, they are likely to fall foul of regulations, the legislation is fairly benign at the moment but I think it will become more onerous over time, the EU has set some ambitious targets. The current suite of legislative requirements are in essence, a data collection exercise, the EU want to set a baseline, from which, further analysis will be undertaken and this will be used to design future legislation and this is likely to include the use of renewable energy, waste heat reuse and sustainable building construction, in some EU member states this is already apparent.

Secondly, other apects of the EU legislation apply to both the operators of, and the customers of colocation and cloud data centres, with respect to GHG emissions. If carbon taxes increase or company carbon budgets are introduced, customers will look to go where their IT costs, in terms of carbon, are less.

If a data centre hasn't developed a sustainability strategy, you may find your customers moving to one that has. The legislation is already in play for this, the Digital Operations Resilence Act, Corporate Sustainability Reporting Directive and the Taxonomy Climate Delegated Act.

Opportunities for Data Centres to Decarbonise

A inefficient data centre, powered by renewable energy, is still an inefficient data centre, so merely buying renewable energy (which incidentially seems to be the first port of call for data centre operators) isn't going to be sufficient.

Consider using sustainable construction materials, this will reduce the embodied carbon of the building, don't over-engineer the solution, very few IT applications require the higher tier or EN 50600 classification levels, and treating all IT applications the same leads to complexity, and higher costs and rarely achieves what the customer intended.

Dissecting the Survey Findings

Some of the responses I'd take with a considerable pinch of salt, the "talk" isn't matched with the "walk" in my opinion. I'm not a lover of "carbon capture" which to me is abidcating your own responsibilities, I doubt very much whether targets are being hit and I'm not convinced that the solutions cited are actually being explored in any great depth.

I do agree that funding is a barrier, but the technology, knowledge and regulations are already in play so I dont see this as a barrier, more of a smooth path for transition, perhaps the cost is the real issue. Companies always look at solutions after they've been affected by an event, the climate emergency is a well signaled event, failure to adapt or to mitigate the effects of a rise in temperature is going to affect your business on multiple levels. I'll point to the recent floods in Valencia, where the Spanish Govenment has annouced an €11.4 billion aid package, this is a huge sum compared to the cost of building a dam across the Poyo ravine whch in 2007 was estimate at €162 million.

Perhaps more focus on climate risk is needed?

The Future of the Data Centre Industry

I think, despite the AI goldrush, the data centre sector is in a very exciting place for the future, we're going to see some very interesting developments triggered in part by AI but also legislation for climate change, and we can stop moaning about this, it is NOT targetted at data centres per se, its targetted at everybody and every sector will have to play their part.

I'd also say that data centres are quite a long way down the adaption and mitigation pathways, everything we need is already here, we just have to change our thinking and adopt them.

About Carbon3IT

Carbon3IT Ltd is a Sustainable ICT consultancy that has been operating since 2010, we work primarily in the data centre sector, advising on energy efficiency and sustainability matters but also assist in the development of international and regional standards and legislation.

We have developed a "Building Sustainable Data Centres" course that is delivered at the National Data Centre Academy, which provides a comprehensive overview of best practice.

We are currently working with, and embedded client side, with the sustainability team of Europes largest data centre constuction project, working with UK Dept of Energy Security and Net Zero on the Transport, Industrial Cooling and Refrigeration Project (TICR) as well as the Sub-Optic Foundation, Internet Society and the University of California (Berkeley) on the Sustainable Subsea Network Project focussing on Cable Landing Stations and soon to commence work on a number of interesting projects in 2025.

Construction & Shipping



Carbon Market Challenges for Construction and Shipping Industries Amid Rising ETS Costs

As carbon markets across Europe undergo regulatory tightening, the construction and shipping sectors in the UK, France, and Germany face increasing costs and operational pressures to meet stringent emissions targets.

While the EU and UK Emissions Trading Systems (ETS) are critical in encouraging these high-emission sectors to reduce their carbon footprints, the rising cost of carbon allowances is challenging firms to rethink their decarbonisation strategies.

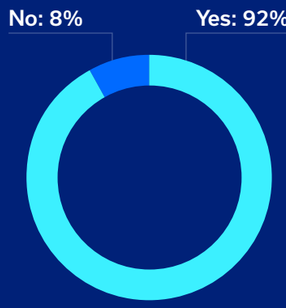
Despite a high level of engagement with net zero goals, the path to decarbonisation varies significantly across countries, as firms encounter unique barriers related to technology, funding, and regulatory complexity.

Decarbonisation Success and Strategic Readiness Across Europe

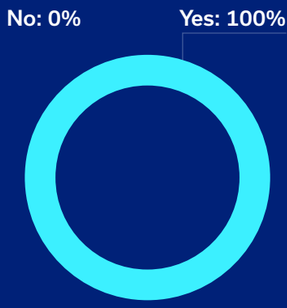
The construction and shipping industries have made substantial progress toward net zero goals, with the majority of firms across the UK, France, and Germany reporting success in meeting emissions targets.

Decarbonisation Success by Country

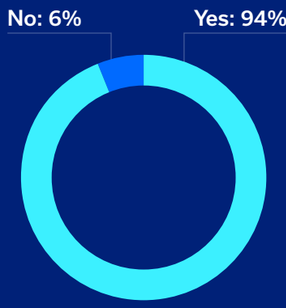
UK: Has your Organisation Published a Net Zero Strategy?



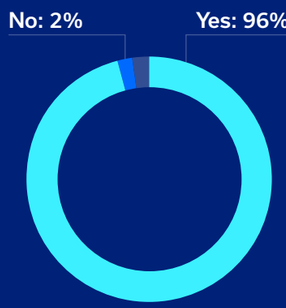
Germany: Has your Organisation Published a Net Zero Strategy?



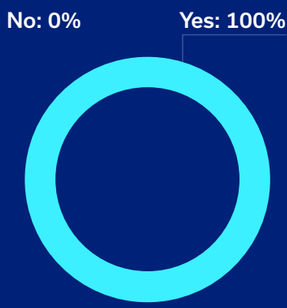
France: Has your Organisation Published a Net Zero Strategy?



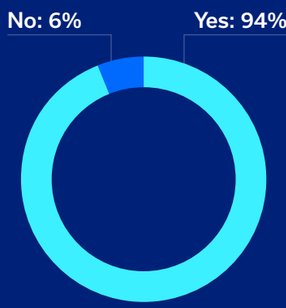
UK: Are you hitting your carbon emissions reduction targets?



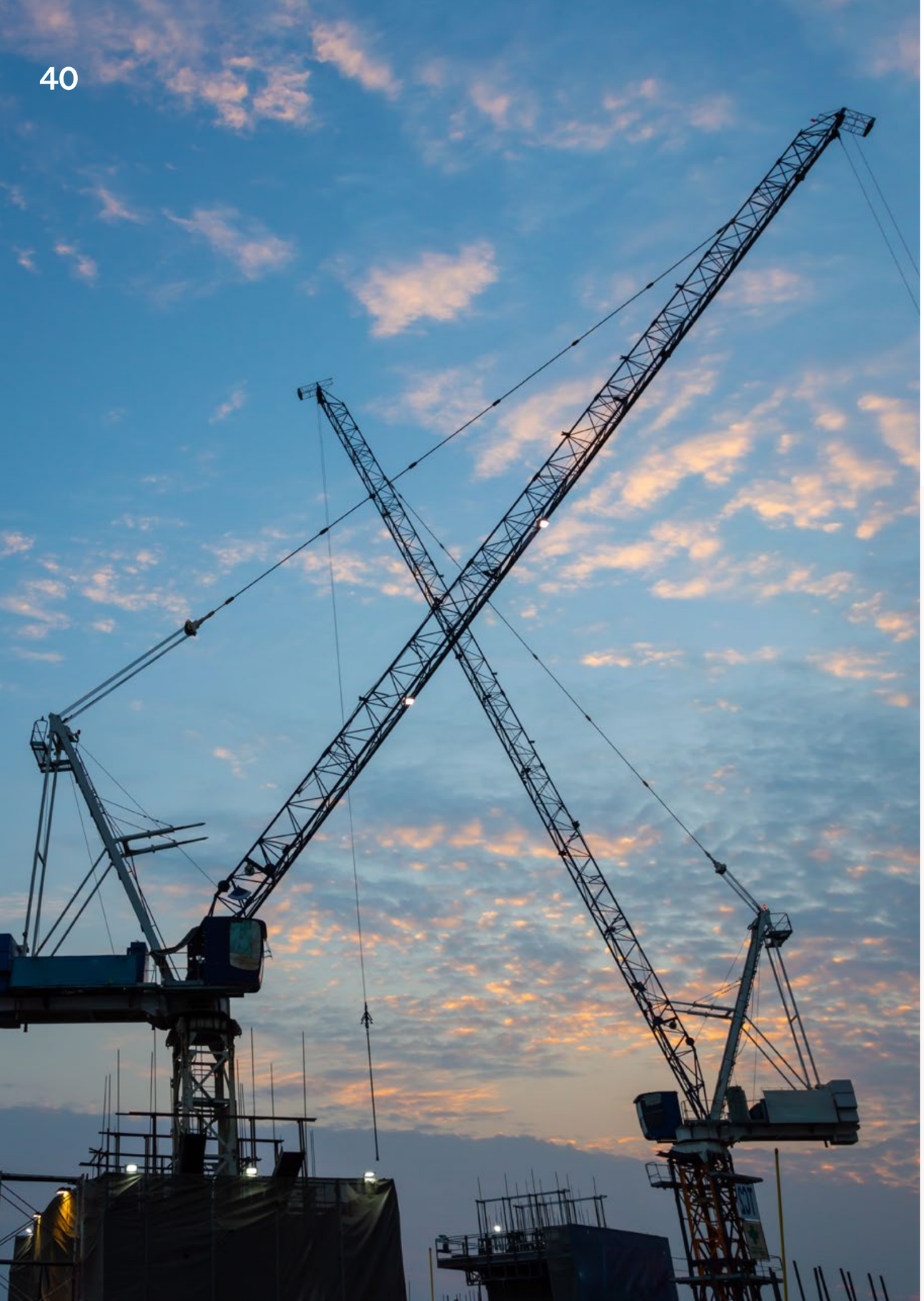
Germany: Are you hitting your carbon emissions reduction targets?



France: Are you hitting your carbon emissions reduction targets?



While these statistics highlight strong progress, they also underscore the ongoing need for compliance strategies that can keep pace with regulatory shifts and the rising costs of carbon allowances under ETS regulations.

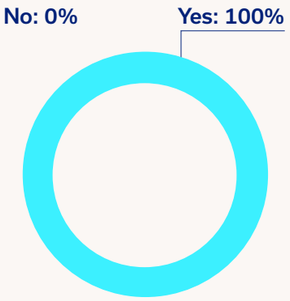


Emissions Trading System (ETS) and Carbon Costs: A Growing Financial Burden

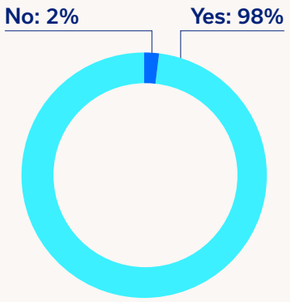
The tightening of ETS policies is expected to increase demand for allowances, putting pressure on construction and shipping firms to intensify their decarbonisation efforts or face higher operational costs. As allowances become more expensive, firms are increasingly looking at futures contracts and other financial instruments to manage the volatility and cost uncertainty in the carbon markets.

Carbon Compliance – Is the Shipping and Construction Sector Prepared for Cost Increases?

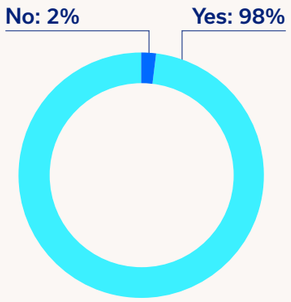
Will carbon allowance demands increase due to new regulations



Have you budgeted for high carbon allowance costs?



Are you mitigating your risk of increased carbon allowance prices?



*Some totals do not equal 100% as ‘Don’t know’ option was selected

This financial landscape has prompted a notable shift, with firms in all three countries actively budgeting for higher carbon costs.

In the UK, 92% of respondents have allocated budget resources to manage rising carbon expenses.

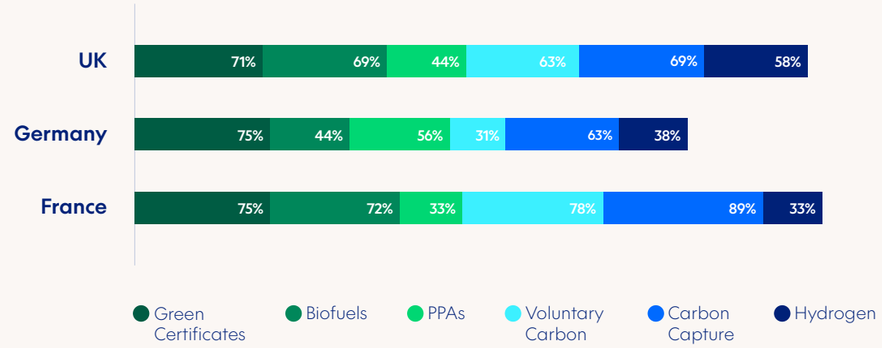
France and Germany are similarly prepared, with firms in these countries proactively investing in compliance mechanisms to mitigate risk.

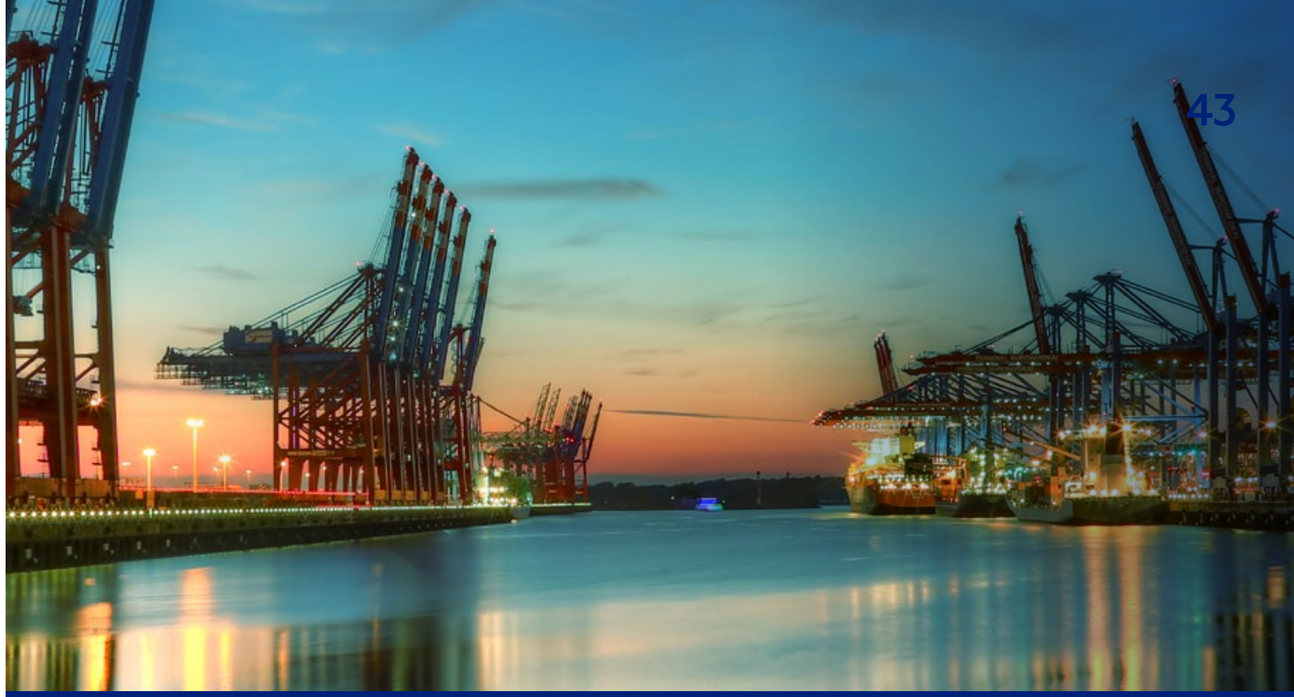
Despite these efforts, the unpredictability of carbon pricing remains a significant challenge, underscoring the need for resilient and flexible carbon management strategies.

Decarbonisation Solutions: Technologies and Trends Across Europe

The construction and shipping sectors across the UK, France, and Germany have embraced a range of decarbonisation solutions, although adoption rates and technology choices vary by country.

Solutions used by Construction Firms and Shipping Operators to Decarbonise





Green Certificates

Green Certificates remain one of the most widely adopted tools for carbon offsetting in these industries, with a high uptake in France (75%), Germany (75%), and the UK (71%). Green Certificates allow firms to demonstrate their support for renewable energy projects, helping offset emissions without requiring significant on-site infrastructure changes.

Biofuels

Biofuels, an essential alternative to fossil fuels, show strong adoption across the UK (69%) and France (72%), where government incentives and subsidies support the transition. Germany's uptake of biofuels is lower at 44%, reflecting its focus on other renewable solutions, such as green hydrogen and PPAs.

Power Purchase Agreements (PPAs)

PPAs, which provide a fixed-term commitment to purchasing renewable energy, are especially popular in Germany (56%) and less so in France (33%) and the UK (44%). This divergence may reflect differences in national renewable energy policies and grid infrastructure, with German firms benefiting from more established PPA frameworks that facilitate direct engagement with green energy providers.

Hydrogen

Hydrogen is gaining traction as a long-term decarbonisation solution, particularly in the UK (58%) and France (33%). Germany has a more cautious approach, with only 38% of firms investing in hydrogen, possibly due to the significant infrastructure investment required for hydrogen production and storage.

Will the Shipping Sector Stay on Course for Net Zero?

The shipping sector is at a critical juncture in its journey toward decarbonisation, facing financial, technological, and regulatory challenges.

The International Maritime Organization (IMO) has set ambitious targets, including reducing greenhouse gas (GHG) emissions by 50% by 2050 compared to 2008 levels.

This shift requires significant investment, with the International Chamber of Shipping (ICS) estimating $4 trillion will be needed to decarbonise the sector globally.

A significant regulatory driver is the Maritime Fuel EU Directive, which mandates the reduction of GHG intensity in maritime fuels by 2% starting in 2025 and escalating to 80% by 2050.

While this directive aligns with the inclusion of the shipping sector in the EU Emissions Trading Scheme (ETS) from 2024, it adds financial and operational pressure. Compliance with both systems requires adopting alternative fuels, including ammonia, hydrogen, and biofuels, as well as upgrading vessels to accommodate these new technologies.

However, challenges abound. Commercially viable zero-carbon fuels are still in the early stages of development, with hydrogen and ammonia requiring extensive research, safety testing, and global infrastructure for widespread adoption.

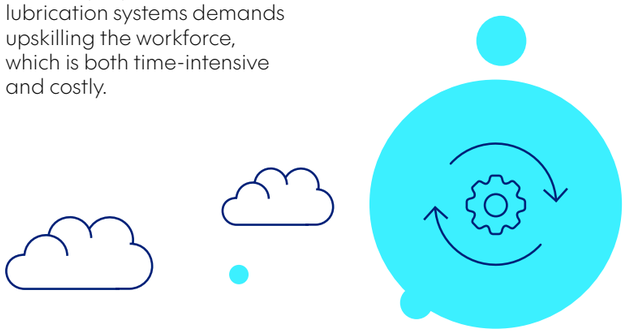
According to Moody's report on shipping decarbonisation, retrofitting vessels and building supply chains for these fuels represent substantial barriers, particularly for small and medium-sized operators who lack access to capital.

The directive also presents logistical challenges. The infrastructure to store, transport, and distribute alternative fuels is insufficient at many ports, especially in developing regions. This uneven readiness creates a fragmented global market, complicating the shipping industry's ability to comply with unified standards.

The availability of skilled workers trained to manage alternative-fuel vessels and systems is another hurdle. Transitioning to technologies like energy-efficient wind-assisted propulsion or air lubrication systems demands upskilling the workforce, which is both time-intensive and costly.

Opportunities for progress include public-private partnerships and investments in green hydrogen projects. Collaboration among global regulators to standardise compliance frameworks can also reduce uncertainty, encouraging greater investment in research and development.

However, without comprehensive alignment and financial support, the shipping industry will struggle to meet the ambitious goals outlined by the Maritime Fuel EU Directive and broader climate targets.



Building the Future in the Construction Sector

The construction sector is one of the largest contributors to global greenhouse gas emissions, with embodied carbon—a term referring to emissions generated during the production of building materials—posing a significant challenge.

The UK's HS2 rail project, despite its ambition to improve connectivity, has come under scrutiny for its substantial carbon footprint, highlighting this challenge.

According to Mark Thurston, CEO of HS2 Ltd, efforts to reduce emissions include using low-carbon concrete and sustainable steel, but these materials remain expensive and not universally available.

Technology and material innovation in construction lag behind other sectors. Developing countries face the added challenge of limited access to green materials and carbon capture technologies.

Even in developed markets like the UK, the integration of sustainable practices in construction has been slow due to a lack of standardised metrics for embodied carbon. Without clear benchmarks, achieving compliance with emerging regulations becomes difficult.

Funding constraints further hinder progress. Retrofitting existing buildings and investing in green construction technologies require significant financial resources. Although subsidies and tax incentives are becoming more common, they often fail to cover the high initial costs associated with adopting green materials or energy-efficient designs.

The UK's Net Zero Strategy mandates substantial reductions in building emissions by 2030. Yet, fragmented regulations creates inconsistencies that slow progress. This complexity is further magnified by the introduction of stricter ETS guidelines for embodied carbon.

Innovations such as modular construction techniques and advancements in carbon capture technologies offer hope for reducing emissions. However, scaling these solutions will require robust public investment and policy support.

Despite the challenges, the construction sector holds immense potential for decarbonisation.



Industrial Manufacturing

Carbon Market Challenges for European Manufacturing Industries

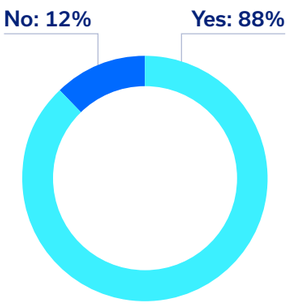
As Europe intensifies efforts to achieve net zero, the manufacturing sector in the UK, Germany, and France faces increasing regulatory and financial pressures, particularly through the Emissions Trading System (ETS).

The findings in this report underscore both the urgency and complexity of decarbonisation, revealing that, while manufacturers are actively planning for net zero through the use of carbon markets, significant barriers persist. And despite most respondents highlighting their commitment to reducing emissions, many are failing to hit their key targets.

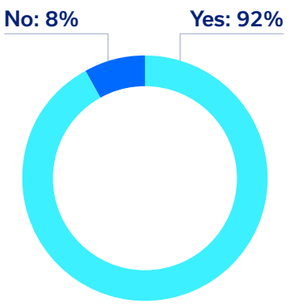
With varying levels of compliance readiness across these three economies, the path to sustainable manufacturing is marked by divergent national strategies, regulatory pressures, and technological challenges.

Carbon Compliance – Is the Manufacturing Sector Prepared for Cost Increases?

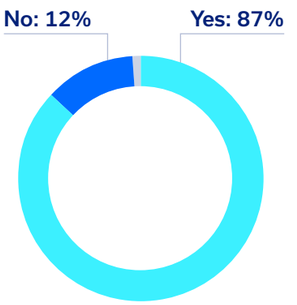
Will carbon allowance demands increase due to new regulations



Have you budgeted for high carbon allowance costs?



Are you mitigating your risk of increased carbon allowance prices?



*Some totals do not equal 100% as 'Don't know' option was selected

Barriers to Net Zero for the Manufacturing Industry

The following obstacles have been selected as preventing large-scale manufacturers from achieving net zero.

Technology Availability

Lack of suitable technology ranks as the highest barrier, cited by 75% of respondents. Manufacturers struggle to access the necessary tools for clean energy integration and carbon reduction.

Knowledge Gaps

61% report a lack of expertise in decarbonisation, particularly in adopting advanced technologies and compliance strategies.

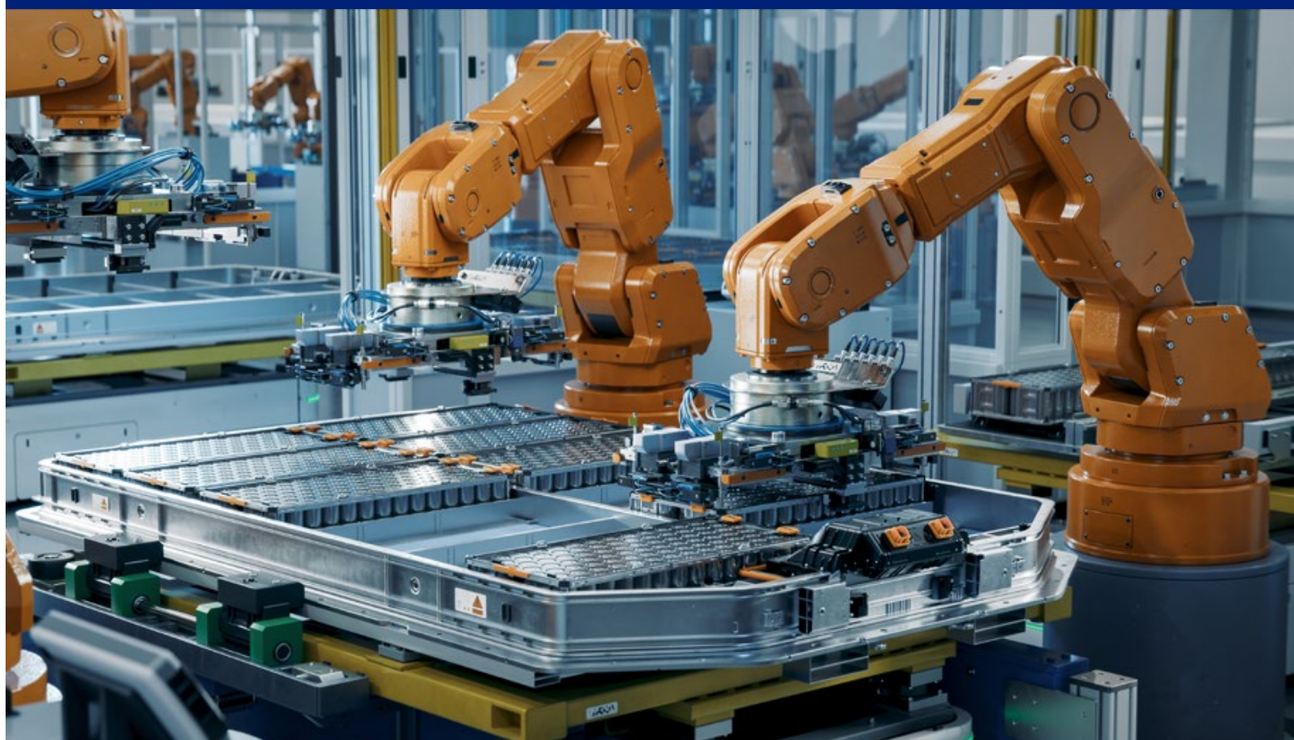
Funding

Securing adequate funding is a major concern, with 58% indicating financial limitations prevent significant investment in green technologies.

Regulatory Complexity

The complexity of regional and EU-level regulations adds administrative burdens, with 63% of manufacturers highlighting this as a barrier.

This high-risk landscape not only affects short-term compliance but also places long-term net zero targets at risk, particularly for those without a clear carbon compliance strategy.



The Role of EU and UK ETS in Manufacturing Decarbonisation

The Emissions Trading Systems (ETS) in both the EU and UK are pivotal in driving emissions reductions across high-energy industries, including manufacturing.

Of the survey respondents, 88% anticipate an increased demand for carbon allowances as regulations tighten.

In response, 92% have already budgeted for higher carbon costs. Despite this preparation, the sector remains vulnerable to price volatility in the carbon markets. High levels of uncertainty around carbon allowance prices add further pressure, with many manufacturers (87%) using futures contracts to mitigate financial risks.

The industrial and manufacturing sectors have been covered by the EU ETS since 2005 and more recently the separate post Brexit UK ETS since 2021.

However, it has only been in recent years, with a near tripling of allowances prices (EUAs hit €100 in Q1 2023), that ETS compliance costs have really started to impact this sector. Added to this, ETS reforms and the introduction of CBAM (EU in 2026, UK in 27) will drastically reduce free allocations, further increasing allowance purchasing needs and costs.

The rapid growth in renewable power has shouldered much of the ETS burden to date but the baton is now passing to the industrial sector to achieve the ambitious carbon reduction targets set under both the EU ETS & UK ETS by 2030 and beyond.

The industrial and manufacturing sector is arguably more difficult and costly to decarbonise, meaning carbon market solutions remain critical for the sector to utilise through a focused strategy to manage future price risk.

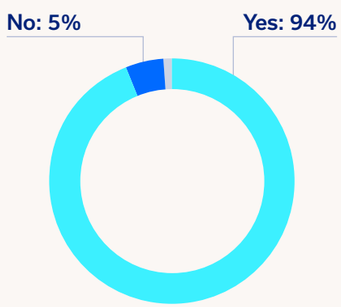


Decarbonisation Approaches and Technological Solutions

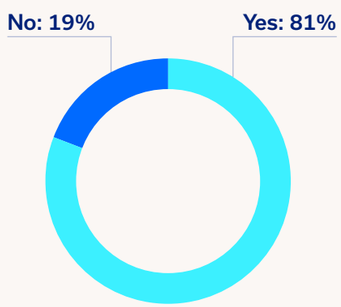
Across Europe, manufacturers employ various technologies and solutions to decarbonise, with notable differences in adoption patterns across countries.

Net Zero Progress for the Manufacturing Sector

Have you published a decarbonisation strategy?



Are you hitting your decarbonisaiton & transition targets?



*Some totals do not equal 100% as 'Don't know' option was selected

Green Certificates

Widely used in the UK (60%) and Germany (59%), green certificates enable manufacturers to offset emissions by purchasing renewable energy credits. This solution has gained traction across Europe as a cost-effective way to lower reported emissions.

Biofuels and Hydrogen

France leads in hydrogen adoption (60%), while biofuels are popular in the UK (60%) and France (55%), where subsidies and governmental support have made them viable alternatives to fossil fuels.

Power Purchase Agreements (PPAs)

France's manufacturers show the highest reliance on PPAs (59%), securing long-term access to renewable energy sources. Germany and the UK lag slightly behind, with PPA adoption rates of 45% and 40%, respectively.

Carbon Capture

Germany's low adoption of carbon capture (24%) reflects limited infrastructure and funding for this technology. In contrast, the UK and France (both at 51%) show stronger engagement with carbon capture seens as a viable pathway to net zero, facilitated by more substantial public and private sector support.

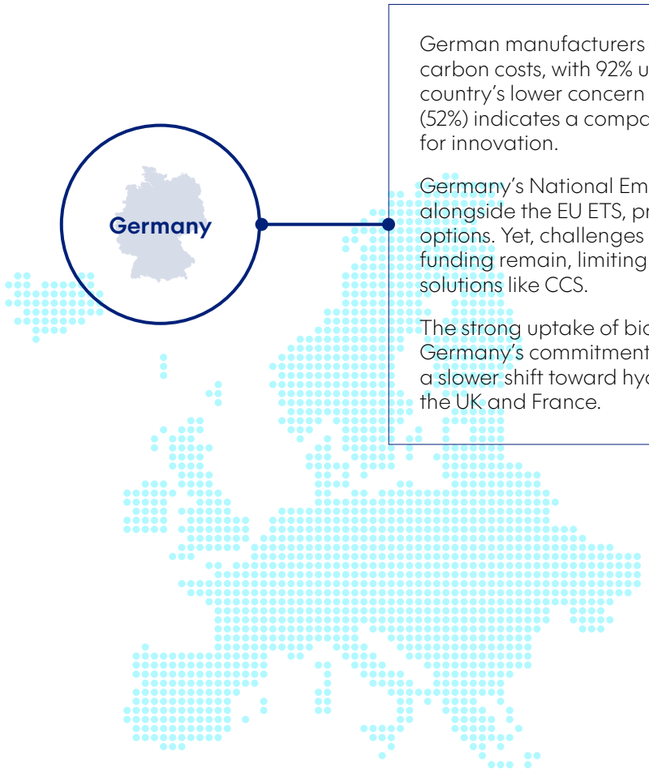
Decarbonisation Strategies in the UK, Germany, and France

Each country has unique regulatory frameworks and sectoral incentives that shape its manufacturing decarbonisation approach.



The UK leads in ETS participation, with 91% of manufacturers actively involved in the carbon market. In addition, 95% of UK companies have published net zero plans, and 93% are budgeting for increased carbon costs.

Yet, the UK's manufacturers report technology availability as their most significant barrier (82%), followed by knowledge and funding gaps. The regulatory environment, shaped by schemes like the Energy Savings Opportunity Scheme (ESOS), requires energy audits and encourages efficiency but adds administrative complexity.



German manufacturers are proactive in managing carbon costs, with 92% utilising futures contracts. The country's lower concern over technology availability (52%) indicates a comparatively supportive environment for innovation.

Germany's National Emissions Trading Scheme (NEHS), alongside the EU ETS, provides additional compliance options. Yet, challenges around regulatory clarity and funding remain, limiting broader adoption of advanced solutions like CCS.

The strong uptake of biofuels and PPAs reflects Germany's commitment to renewable energy but signals a slower shift toward hydrogen and CCS, compared to the UK and France.



In France, 80% of manufacturers participate in ETS schemes, marking the lowest participation rate among the three countries.

Access to decarbonisation technology is a key challenge, with only 20% reporting sufficient availability. However, France shows strong adoption of PPAs and hydrogen, partly due to national incentives supporting renewable energy transition.

France, a leader in nuclear power, has taken a similar approach to hydrogen by committing billions of euros to developing the technology as a reliable and viable clean fuel source. The UK pales in comparison when it comes to investments in hydrogen power.

French manufacturers also report the highest funding and knowledge barriers, highlighting a need for greater resource support. Regulatory frameworks, such as the French Climate Law, add further compliance requirements, which some firms struggle to meet due to resource constraints.

The Financial Burden of Carbon Compliance

The escalating costs of carbon allowances pose a significant challenge, particularly for manufacturers with high emissions profiles that are (almost) impossible to remove or reduce.

While 92% of all respondents have budgeted for higher compliance costs, only 81% report that they are on track to meet their net zero targets.

This gap underscores the financial pressure of rising carbon prices, which require careful budgeting and risk management.

Notably, 87% of respondents have taken steps to mitigate risk, primarily through carbon futures contracts. However, continued volatility in the carbon markets may further strain budgets and impede decarbonisation efforts.



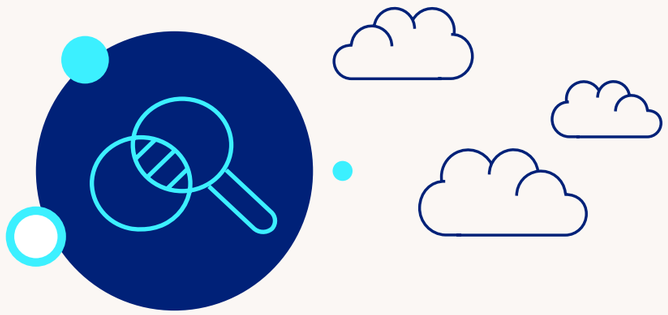
European manufacturing faces an uncertain decarbonisation future

The survey highlights varied readiness and challenges faced by European manufacturers in decarbonising under the pressure of expanding ETS regulations and national policies.

While the UK's manufacturers lead in ETS participation and budgeting for future costs, Germany benefits from stronger innovation support, and France demonstrates a keen focus on hydrogen and PPAs.

However, the path to net zero remains fraught with obstacles. Technology availability, funding, and regulatory complexity require coordinated national and regional support to enable cleaner, more sustainable manufacturing.

With the demands of the carbon market only expected to increase, a robust, well-supported approach to decarbonisation is essential for Europe's manufacturers to meet climate goals without compromising operational viability.





Voice of the Industry
Jon Flitney, Energy and Climate Change Manager, Mineral Products Association

The MPA is the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica sand industries. In MPA's membership the cement and lime sectors are the most energy and carbon intense sectors. In the UK around 9 million tonnes of cement are produced, which releases 6.5 million tonnes of CO_2.

The manufacture of cement and lime requires significant fuel input to reach temperatures of 1,450oC and 950oC respectively and electricity for raw material preparation, conveying, milling and blending.

However, crucially, this thermal and electrical energy requirement only accounts for around 30% of CO_2 emissions. The remaining 70% of emissions arise from a chemical reaction when the calcium carbonate raw materials are heated to high temperatures to form calcium oxide (with the release of carbon dioxide).

These process emissions are one of the biggest challenges to decarbonisation, along with many cement and lime sites being in dispersed or isolated rural locations.

The cement sector operates in an internationally competitive environment, with UK sites competing in regions for investment within their globally owned groups. In addition, cement (and clinker) is transported and traded internationally, so a level playing field with competitors on energy and carbon costs is vital to avoid carbon leakage (the offshoring of emissions and industry due to differences in carbon pricing and policies).

The MPA cement and concrete roadmap focuses on five levers to achieve net zero, i. decarbonised electricity (4% emissions reduction), ii. transport (7%), iii. low carbon cements and concretes (12%), iv. fuel switching (16%, primarily from coal to waste derived fuels) and v. CCUS (61%).

It then goes beyond net zero with recarbonation, as concrete re-absorbs CO_2 during its lifetime, and concrete's high thermal mass reduces electricity consumption associated with heating and cooling buildings. The lime roadmap uses similar levers to be net negative, albeit with different fuel considerations due to the current use of gas.

The use of CCUS is thus vital to decarbonise cement and lime, mainly due to the unavoidable process emissions. Other aspects such as using alternative fuels, whether waste derived fuels or hydrogen are also important along with low carbon cements and concretes, where high carbon components are replaced with other materials.

In order to deliver cement decarbonisation in the UK there needs to be suitable policy framework to enable investment in UK decarbonisation, across many different areas. This also extends to carbon pricing which, combined with a UK CBAM, needs to be robust so members can justify investments in the UK over other countries.

The top three key measures required are:

- Government to implement a watertight UK CBAM for cement, drawing on international best practice, to ensure levelised carbon costs with imports.
- An Industrial Carbon Capture business model framework, beyond that for Track 1 cluster sites (capex and opex) that is visible and remains stable for the next 15 years to enable investment planning at dispersed sites.
- Funding, at a suitable scale, to support upfront development costs, such as Front End Engineering Design study, for CCUS projects.

While these are the most important measures, they cannot be viewed in isolation as alone they will not deliver decarbonisation of the UK cement and lime sectors, and many other measures are also needed.

The Paradigm Shift for Carbon Markets



The UK and EU Emissions Trading Schemes (ETS) are at a tipping point, signaling a paradigm shift for Europe's largest carbon-emission-emitting industries. This report, grounded in extensive survey data from data centers, aviation, manufacturing, construction, and shipping sectors across the UK, France, and Germany, reveals a clear urgency: businesses must prepare for a future where short-term carbon strategies are no longer sustainable.

As carbon prices increase and free allocations phase out, organisations should be further compelled to adopt a proactive, strategic approach to carbon compliance to avoid escalating financial liabilities. The survey's findings underscore the reality that carbon demand—and consequently, carbon costs—are on an upward trajectory across all surveyed industries.

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Companies are taking these shifts seriously, with over 90% of organisations in all three countries incorporating projected carbon costs into their financial forecasts.

This broad recognition of the financial stakes reflects the need for companies to embed carbon considerations into their business models to adapt to the evolving carbon market landscape.

These anticipated cost increases will be driven by a range of forces, but the key driver is the ETS roadmap, which has been published by the EU and UK for their respective ETS schemes.

Managing Risk in a Volatile Landscape

Risk management within the carbon market is also a priority for companies. The volatility of carbon prices, driven by regulatory changes, renewable energy variability, and speculative forces, makes price prediction and budget allocation particularly challenging.

Organisations must understand the need for specialised knowledge and the value of engaging with expert teams to navigate the complexities of carbon pricing.

As carbon markets evolve, this expertise will become increasingly important for organisations to secure cost-effective allowances and minimise exposure to price fluctuations.

Each of the industries that we have examined will be impacted differently as sector-specific changes are implemented in the UK and EU emissions trading schemes.

However, a range of other factors will have a major impact on carbon prices, including wider environmental regulatory changes in the UK and EU.

The European Union's Green Deal, with its ambitions 2030 targets, will further restrict allowance availability and create increased compliance demand.

Simultaneously, the UK's Carbon Budget framework requires all ETS sector participants to achieve substantial emission cuts, with failure resulting in penalties and reputational harm.

Another significant regulatory change is the UK & EU's Carbon Border Adjustment Mechanisms (CBAM), which introduce a carbon price on imports in 2026-2027.

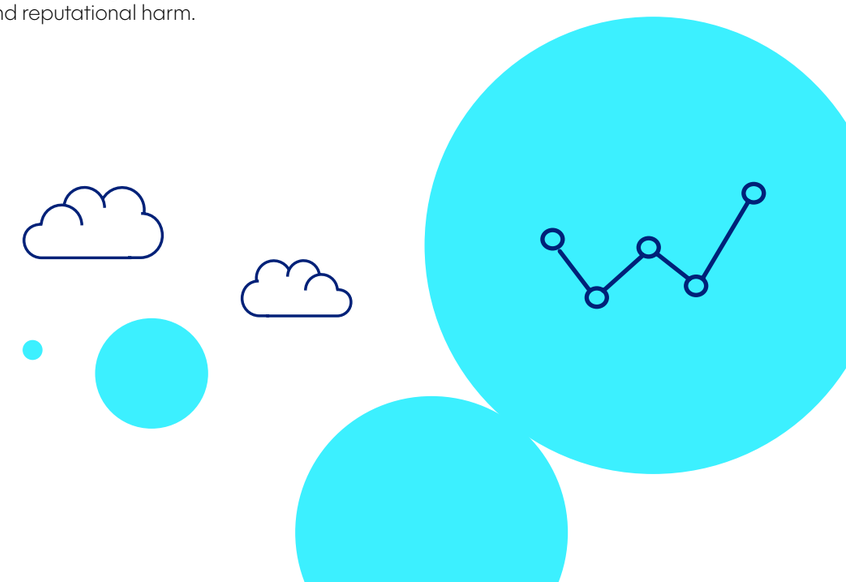
This introduces a carbon price on imports and changes the way in which carbon leakage is addressed within the established ETS system.

Consumers & Stakeholders will Demand Change

Beyond regulatory pressures, companies are also facing 'bottom-up' forces from consumers, stakeholders, and investors who are increasingly vocal about sustainability expectations.

Public awareness of corporate carbon footprints, especially within industries like aviation and shipping, places additional pressure on companies to reduce their environmental impact.

This reputational risk, coupled with regulatory mandates, reinforces the need for businesses to demonstrate transparency and commitment to net-zero goals.



Complex Problems Require Complex Solutions

Each industry and country exhibits unique approaches to achieving these goals, underscoring both the diversity of available solutions and the need for a tailored approach to decarbonisation.

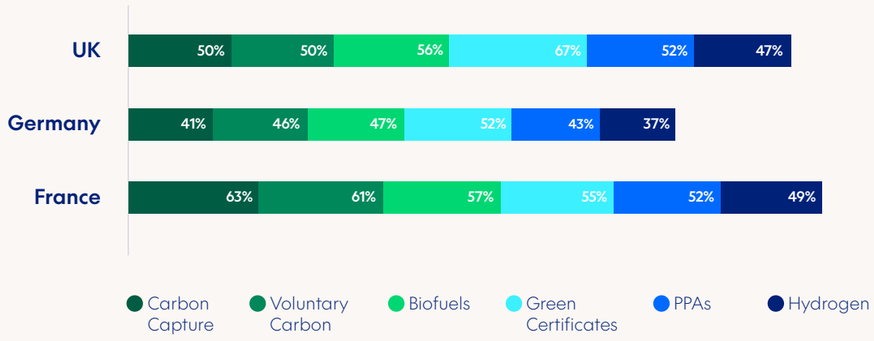
In the UK, biofuels (used by 56% of respondents) and green certificates (67%) are prevalent, reflecting the country's focus on transitioning energy sources.

In France, carbon capture technologies are favored by 63% of companies, while German businesses display a higher reliance on green certificates (52%).

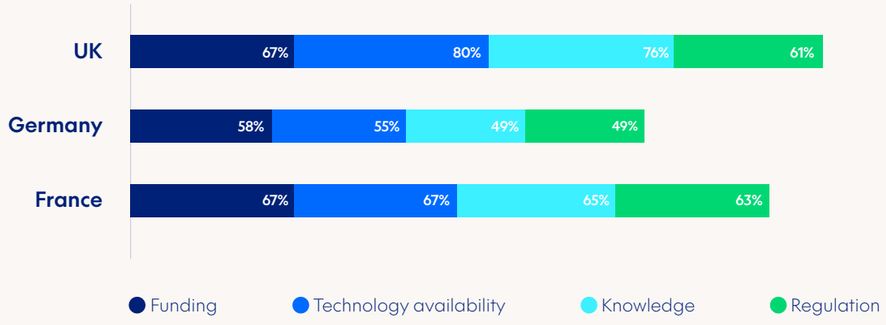
This diversity in solutions highlights that while decarbonisation pathways vary, all are driven by an alignment with regulatory and consumer expectations for lower carbon footprints.

However, as adoption rates reveal, there is significant potential for increased knowledge-sharing and collaboration to make these solutions more universally accessible and effective.

Decarbonisation Solutions



Biggest Barriers to Net Zero for all Survey Respondents



The Barriers to Overcome

While many companies are well on their way with transition plans, there are common barriers to meeting interim net-zero targets.

This may include increased public investment in emerging low-carbon technologies, favorable financing for green projects, and simplified regulatory pathways to encourage innovation.

For instance, technology availability is cited as a major challenge, with 80% of UK companies identifying it as an obstacle to reaching their goals.

Funding and regulatory uncertainties also pose significant barriers; in France and Germany, 67% and 49% of respondents respectively report these as constraints.

Overcoming these challenges will require an integrated response, with governments, industries, and investors working together to provide the necessary support, financing, and regulatory clarity to drive forward the decarbonisation agenda.

The finance generated from ETS schemes is directly used to drive innovation in green technology, highlighting the importance of carbon markets as an investment vehicle for the low-carbon technologies.



Net Zero Progress

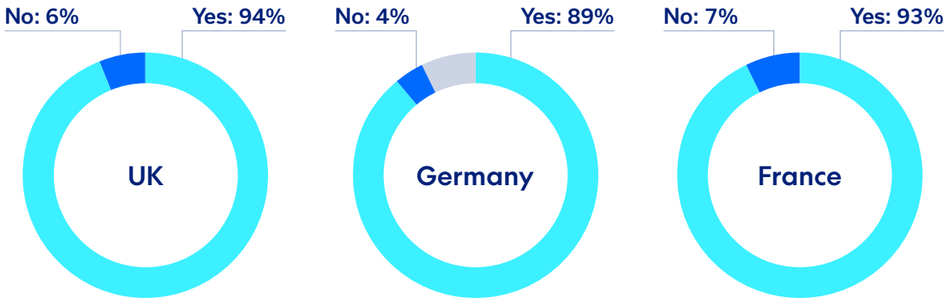
Another important insight from the survey is that a strong majority of companies are implementing interim targets to ensure steady progress.

In Germany, for example, 90% of businesses report meeting their interim targets, with 84% in the UK and 81% in France also on track.

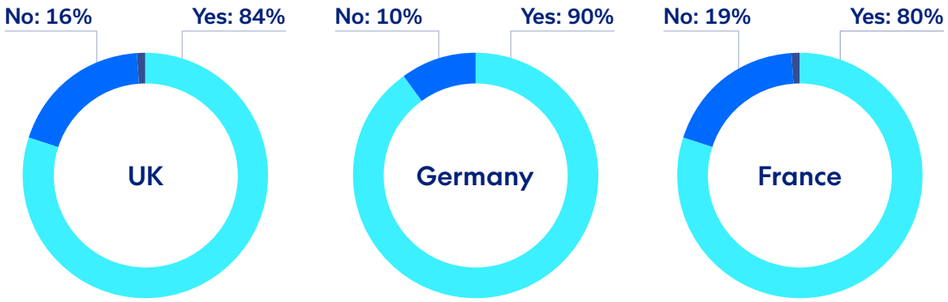
These achievements in hitting short-term goals reinforce that consistent, incremental progress is possible even under challenging regulatory and financial conditions. Setting and meeting interim targets not only improves accountability but allows businesses to refine their approaches in response to market and regulatory changes.

Most companies surveyed are already employing compliance strategies such as futures contracts to mitigate price risk, with 91% of UK and 90% of German respondents using these instruments.

Has your organisation published a net zero transition plan?



Are you hitting your decarbonisaiton & transition targets?



The Paradigm Shift is Approaching for Business, People, and the Planet

As this report demonstrates, the journey toward a low-carbon and sustainable future presents both significant challenges and transformative opportunities for industries across the UK, Europe and beyond.

Achieving net zero and navigating the energy transition requires more than incremental efforts. Organisations must move beyond short-term fixes to fully embed decarbonisation into their strategic priorities, adopting cutting-edge technologies, fostering cross-sector collaboration, and sharing best practices and resources to accelerate progress.

With increasing demand for action from governments and regulations, diminishing flexibility in current frameworks, and heightened expectations from consumers, businesses must take more focused and long-term approach.

Decarbonisation must no longer exist as a side initiative, but a core element of an organisation's long-term planning to remain resilient and competitive.

Our insights prove that while many industries have laid the groundwork for change, and have taken steps to plan for higher carbon compliance costs, significant gaps remain in their adoption of technologies and solutions. It's also clear to see that there are varying levels of uptake from one country to another, highlighting the impact of regulation.

To address this, industry leaders, governments, and financial institutions must work together to create an environment where knowledge, innovation, and resources are accessible and scalable.

This collaborative approach will not only reduce risks but also ensure industries are well-positioned to lead global efforts in driving a net-zero future.

Expert guidance will play a crucial role in this process, helping organisations and policymakers navigate the complexities of the energy transition. Only with a unified, strategic focus can the challenges of decarbonisation be met, ensuring a sustainable future for business, society, and the planet.

Sector-Specific Technologies in Decarbonisation Strategies

In their pursuit of net zero, organisations are investing in various technologies and carbon offset mechanisms, although regional preferences differ:

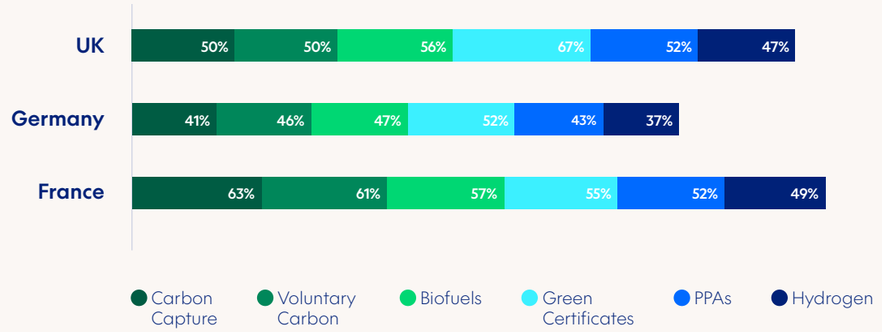
Green Certificates are the most commonly used tool across all regions (59%), with the UK leading at 67% adoption, followed by France (55%) and Germany (52%).

Power Purchase Agreements (PPAs) and **Carbon Capture** are also significant, with the UK showing a 52% adoption rate in PPAs, and France leading in carbon capture use at 63%.

Biofuels are utilised by 53% overall, seeing the highest adoption in France (57%) and the UK (56%).

Voluntary Carbon Offsets have a notable presence, particularly in France, where 61% of organisations employ them.

Solutions used by Organisations to Achieve Decarbonisation



An Award-Winning Team of Carbon Market Experts

Access Bespoke and Long-Term Decarbonisation Solutions

CFP Energy works with some of the largest organisations in the UK and Europe, supporting their carbon compliance strategies and delivering specialised decarbonisation services.



For immediate support contact:

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About CFP Energy

CFP Energy provides large-scale European organisations with specialised energy transition and decarbonisation services.

Our team can support your net zero goals while also delivering long-term security in a volatile energy landscape through bespoke financial and physical products.

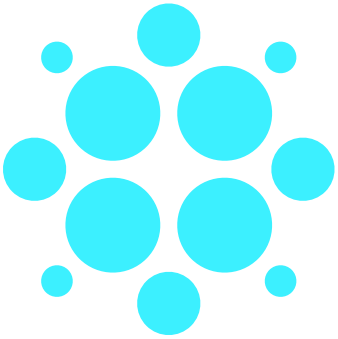
Environmental
- Compliance Carbon
- Voluntary Carbon
- Renewable Energy Certificates
- Liquidity Solutions
- Structured Solutions
- Shipping Emissions Compliance
- Carbon Border Adjustment Mechanism (CBAM)

Power
- UK Energy Supply
- Power Market Access & Supply
- PPAs
- Renewable Asset Optimisation
- Cyber Security

Fuels
- Biofuels
- Biogas
- Feedstocks
- Transition Fuels



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