



Yselkla Farmer CEO BEAMA

Foreword

As we look ahead, it is clear that the impact of climate change and the shift towards sustainable practices will profoundly reshape our markets. Both the urgency and scale of this transformation bring challenges and opportunities. We are pinned as one of the largest growth sectors for the UK as we decarbonise – we need to do this sustainably. For many businesses, the rapid pace of change required to do this will introduce significant uncertainty, and navigating these shifts without clarity and support can be daunting.

Our markets rely on stability. In this period of transition, government leadership is crucial. Focused regulation, clear incentives, international alignment, and a collaborative approach between industry and government will be key to ensuring a smooth and successful transition. However, while there is a vital role for government to play, we also recognise that the market must lead the way and retain the flexibility to make informed decisions that drive innovation and efficiency.

Our proposal will strengthen the supply chain for UK industry, leveraging our members unique position to enable electrification nationwide. With expertise in technologies critical to decarbonisation and a practical understanding of the regulatory and operational challenges facing UK manufacturing, our membership is ideally placed to deliver impactful, scalable solutions.

As a leading voice in our sector, BEAMA and its members are committed to working alongside government to achieve our shared goals of decarbonisation and increased resource efficiency. Together, we can ensure that the journey ahead is one of progress, alignment, opportunity, and sustainable growth.



The Electrical Product Sector

£14 billion

UK turnover

90,000 people employed in the UK

£5 billion worldwide



BEAMA 2050 Connected: Shoulder to shoulder for Net Zero alignment

A not-for-profit subscription designed to unite the energy and built environment around the goal of supply chain and business decarbonisation by 2050 and promoting a circular economy. Collaboration through BEAMA 2050 Connected offers subscribers a range of benefits, with subscribing companies gaining access to a wealth of resource and opportunities to navigate the complexities of sustainability in a supported, aligned and consistent way.

Executive Summary

Securing the Future: A Policy Roadmap to Accelerate Industrial Decarbonisation and Strengthen Supply Chains outlines the critical steps required to support UK industries in the transition towards a decarbonised economy.

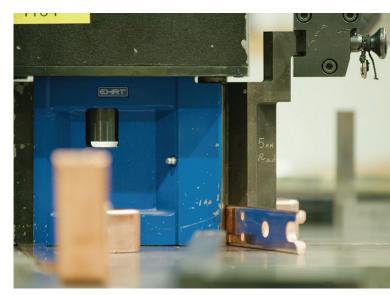
With an emphasis on collaboration between government and the private sector, this report identifies supportive policy which will enable businesses to reduce emissions, enhance resource efficiency, and strengthen supply chains, all while maintaining competitiveness in an evolving global marketplace. These are actions which could form part of the upcoming Industrial Strategy.

The Industrial Strategy will be essential for attracting inward investment, especially as our sector must expand significantly to meet decarbonisation demands. With the urgency to address industrial emissions growing and the UK's legally binding 2030 emissions reduction targets fast approaching, an effective strategy should provide a clear, cohesive, and actionable framework. This approach is vital to enable ambitious reductions while supporting the growth necessary for businesses to navigate the complexities of decarbonisation.

A key theme throughout this report is the importance of government guardianship in standardising sustainability metrics and ensuring fair competition. By establishing clear regulations and promoting transparency, the Government can help businesses avoid the pitfalls of inconsistent practices, while supporting innovation and sustainable growth.









We have ten key asks of the Government from leading manufacturers:

- An Industrial Decarbonisation Roadmap is essentialSee a proposal for elements of this roadmap in Chapter 2
- 2. Government guardianship is critical for standardisation and commercial protection
- **3. International alignment** is a necessity, not a luxury
- 4. Industry needs balance between immediate and long-term policy objectives
- 5. Industry requires **government intervention** on decarbonisation
- 6. Effective oversight is needed to ensure fair competition and a level playing field
- 7. SMEs require support and phased-in regulation
- 8. Product end-of-life responsibility must remain a commercial consideration
- 9. Assess unintended consequences and costs of future policy
- **10.** Seeking cross-party commitment to Net Zero goals

This report calls for the UK Government to lead in creating an Industrial Decarbonisation Roadmap, ensuring businesses can invest in innovation and adapt to new market conditions with confidence.

Our recommendations emphasise the need to balance rapid emission reductions with the commercial realities of UK manufacturers and supply chains.

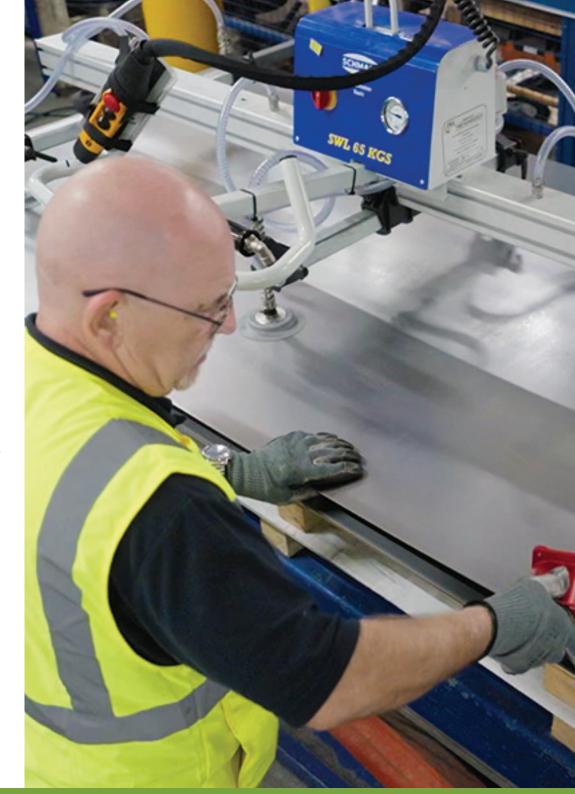
BEAMA and its members are ready to partner with government bodies to ensure that this transition is effective, equitable, and beneficial to all sectors to ensure the UK will not only decarbonise but thrive in the green economy of the future.

A focus on decarbonising business

Addressing industrial emissions is crucial for the UK to meet its legally binding 2030 emissions reduction target. According to the Committee on Climate Change^{1, 2}, achieving this goal will require more aggressive policies in terms of both pace and scale. These policies must extend across a wide range of businesses and catalyse the significant public and private investment needed for industrial decarbonisation.

As a leading trade association, we find that most businesses support change and recognise the market's critical role in achieving decarbonisation. This paper, along with the accompanying roadmap, outlines where businesses would welcome regulation and government support to enable the market to meet Net Zero in a fair and equitable way. We address both corporate and product decarbonisation with reference to wider environmental and circularity considerations that support these efforts, to underscore the scale of the challenge manufacturers face.

At this critical juncture, as the transition to a green economy becomes imperative, we stand ready to work with the Government. Together, we can ensure that this transition is both challenging and supportive for businesses, while aligning with the UK's decarbonisation targets and allowing the government to only intervene where necessary.



¹ Progress in reducing emissions 2024 Report to Parliament (Climate Change Committee, July 2024)

^{2 2023} Progress Report to Parliament (Climate Change Committee, 2023)

Chapter 1

The Role of
Government in
Supporting Industrial
Decarbonisation



As UK businesses adapt to new market conditions focused on sustainability and transparency in non-financial reporting, it is becoming increasingly clear that environmental responsibility is essential for long-term corporate survival. However, this shift towards sustainable practices brings uncertainty, especially in markets historically built on stability and predictability.

The UK Government has a crucial role to play in guiding this transition. To ensure that businesses can confidently invest and innovate, the Government must provide robust, predictable and enabling regulations which are well-enforced, guided by a clear long-term vision that supports the market's leadership while maintaining fairness in the transition.

To attract inward investment and support UK businesses, this vision must be embedded within the Industrial Strategy. This will provide clarity, minimise risks, and align with national and global decarbonisation goals without conflicting or piecemeal regulation. A well-rounded roadmap that considers the entire value chain vital to industrial success will help avoid contradictions and unintended consequences.

Furthermore, the Government must act as a guardian against the exploitation of businesses as they pursue environmental responsibility. Standardising practices before widespread commercialisation is essential to uphold the integrity of the shift towards decarbonisation – an effort that only the Government can effectively oversee and regulate in a rapidly evolving and loosely regulated market.

Ten Key Insights from Sustainability Leaders in UK Manufacturing

An Industrial Decarbonisation Roadmap is essential

There is a consistent need across the market for a comprehensive overarching UK Industrial Decarbonisation Roadmap, supported by versions tailored to individual sectors, products, and services. This should form an integral part of the UK Industrial Strategy.

If created using a value chain view, this roadmap would provide businesses with the framework necessary to align their strategies and ensure cohesive, industry-wide action. A formalised strategy, similar to Ireland's decarbonisation plan, would enable businesses to plan ambitiously and foster long-term investment. We have proposed elements of this roadmap, as supported by BEAMA members, in Chapter 2.

"Industry remains the third largest emitter of greenhouse gases in the UK, after transport and buildings. While significant progress has been made, more needs to be done. Industrial decarbonisation is not only essential for the UK to meet its net zero targets. It can further industrial and economic growth as cost-savings on energy use is invested elsewhere.

For wide-scale industrial decarbonisation to be successful, businesses require policy clarity. A comprehensive Industrial Decarbonisation Roadmap will enable industries and their supply chains to plan for future capacity and make smart investments in the right technologies and people."

Kelly Becker, President UK & Ireland, Belgium & Netherland, Schneider Electric

2. Government guardianship is critical for standardisation and commercial protection

The UK Government's guardianship of standardisation is essential to ensure uniformity in sustainability reporting, data formats, and benchmarks across sectors, thereby protecting UK businesses from highly commercialised and unaligned markets. Inconsistent reporting practices, calculation methodologies, and sustainability metrics cause inefficiencies across supply chains and create uneven competition. Additionally, the lack of standardisation can lead to the unintended disclosure of commercially sensitive data related to product designs, posing risks to data privacy and intellectual property.

Industry needs the UK Government to lead on standardising data formats, reporting requirements, and sustainability benchmarks to ensure comparability, fairness, and the protection of sensitive business information, allowing businesses of all sizes to compete on a level playing field.

3. International alignment is a necessity, not a luxury

Misalignments between UK, EU, and other key market regulations pose significant challenges for UK industry, which depends on complex global supply chains and market access. Strong government support is crucial to enable active UK participation in international standardisation efforts.

To reduce manufacturing costs and streamline operations, the UK should prioritise alignment with relevant EU regulations, particularly regarding product labelling and repair standards. Trade associations, including BEAMA, are already engaged with these developments at an EU level due to the global nature of our memberships. The same principle applies to reporting requirements: if UK sustainability disclosures diverge significantly from international norms, additional resources may be necessary to support compliance.

Beyond the EU, the UK should also focus on alignment with broader international standards. Any efforts toward international alignment, whether with the EU or another international country, should be guided by a UK-specific impact and safety review to identify and address potential conflicts or unintended consequences.

"Aligning UK standards and regulations with the EU will reduce the need for multiple product variants, allowing us to streamline product design and production processes. Harmonisation of standards thus helps us to achieve sustainability goals, overcome border challenges and bring a wider range products to the UK market faster and at lower cost."

John Felgate, Technical Director, Stiebel Eltron

4. Industry needs balance between immediate and long-term policy objectives

Impactful short-term policies working towards a clear long-term decarbonisation vision are essential for building business confidence. However, companies are concerned that this vision must balance the push for decarbonisation with commercial growth pressures, particularly as the demand for electrification increases.

Decarbonisation goals cannot be based solely on absolute emissions reductions – a principles-based regulatory approach would better balance competing objectives. For instance, as being reviewed within the EU, proposed regulations on PFAS present a proportionality challenge, where restrictions may apply to materials with no viable substitutes or those used in minimal quantities, or when balancing repairability with safety in some electrical products. Regulation should also avoid undermining competitiveness by imposing undue reporting burdens, such as requiring vastly different sustainability disclosures between the EU and the UK.



5. Industry requires government intervention on decarbonisation

Businesses urgently require clarity in regulation and certification to pursue decarbonisation effectively. While market-driven initiatives are valuable, there are areas which require consistent government guidance and clear legal requirements. This includes providing clarity on the regulatory obligations alongside evolving market expectations at both product and business levels.

At product level, guidance is needed to ensure product data use aligns with valid, like-for-like assessments, preventing comparative misuse in evaluations that lack consistency. At business level, the number of market-driven schemes and accreditation, many of which are not government-led or regulated, has led to numerous commercial pathways for manufacturers. Without regulatory alignment, this variety risks costly investments in verification efforts that may not contribute effectively to decarbonisation.

"Legrand is committed to accelerating its decarbonisation trajectory. We believe that clear and consistent regulatory guidance is essential to ensure effective decarbonisation efforts across the industry. By providing clarity on regulatory obligations and aligning market expectations, we can prevent costly investments in multiple verification efforts that may not contribute effectively to decarbonisation.

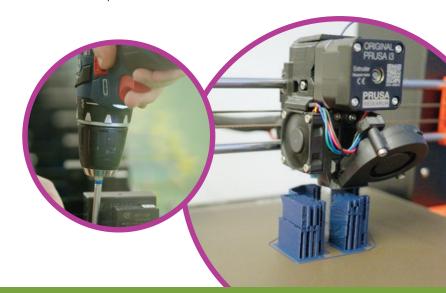
Our goal is to achieve net-zero emissions by 2050, and we are dedicated to reducing our greenhouse gas emissions across our entire value chain by 90% and offsetting any emissions that cannot be avoided. It is essential that a robust framework is established in order for industry to achieve its collective goals."

Steve Marr, Marketing Director, Legrand UK & Ireland

6. Effective oversight is needed to ensure fair competition and a level playing field

To achieve Net Zero and ensure a level playing field across the market, long-term policies must link a company's ability to trade to its compliance with mandatory reporting requirements, with effective enforcement and implications for non-compliance. However, in the short term, as markets adjust to new requirements, these regulations can pose challenges for multinational corporations, especially where research and development is done outside of the UK.

For example, the introduction of a Carbon Border Adjustment Mechanism (CBAM) in the UK in 2027 will cause a significant administrative and cost burden for many UK manufacturers. The UK must balance the potential gains of such a mechanism with any short-term disruption these regulations might create which could impact the wider decarbonisation objectives of the electricity grid, buildings and transport. This could be supported by a long-term plan with a commitment to transition periods.



7. SMEs require support and phased-in regulation

Regulation must apply to businesses of all sizes, with SMEs having these regulations phased in alongside appropriate support, such as targeted funding or grants for product development or factory decarbonisation. This will help to support SMEs who often have more restrictions on resources than larger companies.

This phased approach also ensures fair competition. Permanently unregulated SMEs could gain unfair competitive advantage over larger regulated business that must adhere to more stringent compliance and reporting requirements. As industry is acutely aware, the issue of decarbonisation is time-bound. Permanently excluding SMEs from the inevitabilities of industrial decarbonisation regulations would allow a significant number of emissions to remain unregulated and unaddressed. A phased-in approach with appropriate resources is essential.

"The new climate target announced by the PM at COP29 to reduce emissions by 81% by 2035 should be followed by a concise approach to help the industrial decarbonisation for all organisations. The achieved carbon reduction thus far focused on key technologies and sectors and further decarbonisation will only get trickier to achieve unless we ensure the inclusion of SMEs which combined, can offer a great decarbonisation potential."

Erika Wilson, Managing Director, Wilson Power Solutions Ltd

8. Product end-of-life responsibility must remain a commercial consideration

Manufacturers should not be made solely responsible for end-of-life product management, as material recovery systems are not yet well developed or will be feasible for all companies.

Manufacturers also have limited control beyond product design in influencing consumer decisions at a product's end of live or at stages of repairability. While manufacturers can provide guidance, the decision to implement buy-back or disassembly schemes should remain a commercial choice, also allowing other companies more suited to take over end of life management.



9. Assess unintended consequences and costs of future policy

Decarbonisation policies must be coordinated across government to address the full range of challenges faced by industry. Embedding decarbonisation priorities within the Industrial Strategy, alongside the recommendations in this report, can help to achieve this. Both the Industrial Strategy and related policies should assess potential unintended consequences of regulations, such as reduced product performance, higher breakage rates, and increased production costs.

Electrification of industrial processes will be essential for decarbonisation. However, without equitable government policies to support it, electrification could burden manufacturers with significantly higher production costs. Industrial electricity prices in the UK are already among the highest in the developed world, and the complexities of the current procurement market, driven by volatile costs and contract structures, leaves manufacturers facing varied cost-management challenges. For decarbonisation to be viable and competitive, these issues must be addressed.

10. Seeking cross-party commitment to Net Zero goals

For long-term certainty, more Net Zero-related goals should be enshrined in statutory instruments, ensuring that they remain apolitical and protected from policy changes driven by shifting political landscapes. This is one of the biggest impacts the UK Government could make to give industry the certainty required to invest in decarbonisation.

"For GB to lead in Net- Zero related goals, it is imperative the UK Government develops a solid foundation that enables technology businesses like us to take a longterm view of the market, in terms of investment in R&D and growing the workforce."

Kaushak Patel, Director, Secure Meters (UK) Ltd







Publish an Industrial Decarbonisation Roadmap: A comprehensive plan that includes an operational and product view of all corporate actions required to achieve Net Zero.

Mandatory Sustainability Reporting: Announce mandatory sustainability reporting timeline and data requirements, aligned with the ISSB framework and harmonised with CSRD, SECR, and ESOS standards. This should be accompanied by a review of SECR and ESOS reporting requirements to prevent duplicated carbon reporting across different scopes with potentially inconsistent figures. Clear repercussions for non-compliance must be signalled early on.

Electrotechnical Industry CBAM Impact Review: Launch a government-led review to assess the potential impacts of the proposed CBAM regulation on the electrotechnical manufacturing sector. This review should examine whether broader decarbonisation targets for the electricity grid, buildings, and transport might be affected by short-term supply chain disruptions. Where such disruptions are identified, the review should include recommendations to support the sector's adaptation to these measures, ensuring it can still scale up to contribute to the UK's decarbonisation objectives in these critical areas.

Support for Sustainability Skills Development: Regulatory measures to support sustainability skills development should be internationally aligned, laying the foundation for the policies that follow. This must cover the skills for manufacturers to reduce their emissions and increase circularity, whilst accessing the technologies and ability of the market to provide low carbon solutions to enable their transition plans. This could be by adding an additional 'S' for sustainability into STEM, showing the importance of the focus to develop carbon-related skills in the workforce which enables industrial decarbonisation.

"Strategic consideration must be given to how both industry and government can support the development of sustainable skills to meet these goals, with a coordinated approach that understands the green jobs required for the future.

This approach, if supported in a manner similar to STEM education at school level, will support skills development across the broader construction industry and create pathways for enhanced technical skills development for the future workforce. These skills will be crucial in the successful deployment and adoption of low carbon technology, such as heat pumps.

Henrik Hansen, Managing Director, Vaillant Group UK Ltd

Embodied Carbon Guidance: Launch an expert and manufacturer-based taskforce focused on embodied carbon data measurement and alignment. Improved understanding and consistency in embodied carbon data practices will drive longer-term regulation and competitive practices, with an emphasis on supporting manufacturers in providing comparable information to the market.



Consult on Industrial Digitalisation Benefits and Incentives: Conduct a consultation to evaluate the benefits of digitalisation in industrial settings and identify the incentives needed to drive greater uptake. This will build on insights gained from the industrial electrification consultation, focusing on how digital technologies can enhance operational efficiency, optimise energy management, and support decarbonisation efforts.

Robust Eco-Design and ESPR Assessments: Review and adopt EU principles into UK policy, ensuring alignment with key international target dates and phase-in requirements.

F-Gas Phase-Out Announcement: Initiate the announcement of a phased approach to F-Gas reduction, aligning with decarbonisation goals and international targets across applicable product sectors. For certain areas, such as switchgear, additional market engagement will be required prior to establishing a definitive phase-out plan.

Market-Led F-Gas Phase Out Taskforce for Switchgear: Establish a market-led taskforce with government involvement to review F-Gas phase-out incentives specifically for the switchgear market. Additionally, the Government should encourage Ofgem to support the adoption of SF6-free switchgear.

"As the most potent F-Gas, with a global warming potential 22,800 times higher than that of CO₂, phasing out SF6 will significantly help UK network operators achieve their net zero goals. However, industry lacks clarity on the Government's plans for whether it will ban its use. The absence of such regulation in the UK is creating uncertainty, adding cost, and slowing decarbonisation."

Phil Dingle, Director of Future Networks, Lucy Electric

Publish a UK Green Taxonomy: Provide businesses with clear guidelines on sustainable investment aligned with UK-specific standards.

2026

Mandatory Scope 1 and Scope 2 Reporting: Introduce mandatory reporting for all large companies and SMEs, following a review of SECR requirements to avoid duplicate reporting across different scopes with potentially inconsistent figures. Clear repercussions for non-compliance should be outlined to ensure accountability.

Voluntary Scope 3 Emissions Reporting Guidance: Provide government-backed guidance for voluntary Scope 3 reporting. This should include providing a toolkit with guidance and templates to drive consistency and balance decarbonisation, alongside signposting to industry-led frameworks for sector-specific advice.

Incentives for Reducing Scope 1 and 2 Emissions: Introduce incentives to help companies gather data and switch away from fossil fuels.

Adjustments to Industrial Energy Prices: Incentivise the shift towards cleaner energy sources by adjusting electricity pricing to support decarbonisation in manufacturing, with the specific aim of protecting energy intensive and electrointensive industries.

UK Green Claims Directive: Align the UK's green claims policies with the EU's framework.

Review UK Chemical Policy: Undertake a comprehensive review of chemical policy, such as UK REACH, to develop a cohesive strategy for phasing out or restricting substances of concern. This review should aim to maintain alignment with EU regulations wherever feasible, to support consistency and reduce regulatory burdens on industry.

2027

Enhanced Extended Producer Responsibility (EPR): Introduce the next step for EPR policies with clarity on the phase out of plastic packaging for all but a few exemptions and incentives for reducing packaging waste and increasing recycled material use. Support modulated fees for reusable packaging, with exceptions for specific cases.

Research Taskforces for Net Zero Technologies and Remanufacturing Target: Establish two taskforces to explore product-specific CO₂e targets for key Net Zero-enabling technologies, based on feasibility and competitiveness, and the potential of remanufacturing metrics.

Introduce Industrial Digitalisation Incentives: By 2027 at the latest, implement targeted incentives to encourage the adoption of digital technologies that provide real-time data, optimise system processes, and improve energy management. These measures will support improvements in plant design, maintenance, and operational efficiency through platforms like digital twins, accelerating the shift towards industrial decarbonisation.

2028

Mandatory Transition Plans for Large Companies: Require large businesses to publish transition plans, in alignment with the guidance from the Transition Plan Taskforce, with clear repercussions for non-compliance.

Consultation on Building Regulations: Begin consultations on integrating embodied carbon into building regulations as a compliance metric for new developments and retrofits by 2030.

UK CBAM: First reports submitted by companies, following data collection for 2027, with charges to apply. This is followed thereafter by quarterly reporting.

2029

Phased Introduction of Low-Carbon Metals and Plastics: Set ongoing targets for incorporating a percentage of low carbon metals and plastics in manufacturing, including recycled content and alternatives like biopolymers, while considering material purity requirements for electrical applications.

2030

Scope 3 Reporting for Large Companies: Mandate Scope 3 emissions reporting for large companies across all relevant 15 categories, with defined repercussions for non-compliance. This requirement should be launched alongside sectorspecific reviews to establish practical Scope 3 emissions reduction targets that can be applied across businesses of all sizes.

Transition Plans for SMEs: Introduce a regulatory requirement for SMEs to publish transition plans, in alignment with the guidance by the Transition Plan Taskforce.

Create a Taskforce on Energy Regulation: Establish a taskforce to review the complexities of regulating energy usage for companies, in particular for SMEs, particularly those that are energy-intensive but require growth to meet growing electrification demand. The taskforce would assess whether regulatory future potential targets should be intensity-based (reflecting energy use relative to output) or absolute (placing firm caps on consumption), ensuring fair and feasible regulation that supports decarbonisation without disproportionate impacts on smaller businesses.

Introduction of Digital Product Passports (DPPs): Mandate DPPs for electrical products, allowing tracking of environmental and sustainability data throughout the product lifecycle.

2032

F-Gas Phase-Out for Small HVAC Systems: Phase out F-Gases for small monoblock heat pumps and air conditioning systems under 12kW.

2035

Scope 3 Reporting for SMEs: Extend Scope 3 emissions reporting requirements to SMEs across all relevant 15 categories, with defined repercussions for non-compliance.

No Fossil Fuels in UK Manufacturing: Aim for the complete phase-out of fossil fuels in UK manufacturing, save for pre-researched exemptions with no viable alternative.

F-Gas Phase-Out for Split Systems: Continue the phased reduction of F-Gases, focusing on split air conditioning and heat pump systems, with earlier deadlines for systems with higher global warming potential.

2045

Final Phase-Out of F-Gases: Attain a 100% phase-out of F-Gases across all applicable product sectors where suitable replacements are available. For switchgear, consider establishing separate timelines based on ongoing market engagement.



Net Zero: Achieve full Net Zero status across all sectors in the UK. Certain hard to abate sectors may need to reach Net Zero sooner than 2050 to allow time to address residual emissions by this date.

"Technology sits at the heart of industrial decarbonisation and we need to be laser focussed in deploying it at pace and at scale. This means collaboration between industry and government is vital, and we need clear, long-term roadmaps for decarbonisation that consider the whole of the system and scope of requirements faced by manufacturers.

This report highlights a clear need for coordinated supply chains and Government clarity to make that happen. Much of the technology that we need to deploy already exists. A unified approach gives us the best chance of addressing industrial emissions and taking the vital steps needed to achieve climate objectives."

Carl Ennis, CEO, Siemens UK and Ireland

Securing a Sustainable Future: The Path Ahead

In this period of transition, it is crucial that the current UK Government takes a proactive and collaborative approach to supporting industrial decarbonisation, bringing these actions into the upcoming Industrial Strategy.

In BEAMA's experience, businesses are not averse to Net Zero regulation and would instead welcome it where it supports the commercial market to achieve decarbonisation on a level playing field. A comprehensive, well-structured policy framework is essential for providing businesses with the clarity and confidence needed to drive innovation, investment, and sustainable growth.

The journey to Net Zero is not without its challenges, but with the right combination of regulation, international alignment, and support for businesses of all sizes, we can create a thriving green economy. BEAMA and our members stand ready to work with the Government, offering insight and collaboration to ensure that policies are both effective and practicable.

By fostering open dialogue between government and industry, we can ensure that the UK leads in decarbonisation, while securing the future of its manufacturing sector. For further information or to engage with BEAMA on these issues, please contact our team directly.

Yselkla Farmer, CEO, BEAMA

