ALDERSGATE GROUP
LEADERS FOR A SUSTAINABLE ECONOMY

BRIEFING

NEXT STEPS FOR UK INDUSTRIAL DECARBONISATION POLICY IN 2025

APRIL 2025

Key findings

- All industrial businesses must soon determine their approach to decarbonisation. **The Government must provide clear guidance, adequate incentives and enabling support to drive forward investment** in industrial decarbonisation.
- 2025 is a major year for industrial decarbonisation. The government's policy pipeline creates ample opportunity to address gaps and accelerate the pace of progress. This brief sets out potential actions across the refreshed Industrial Decarbonisation Strategy, the Infrastructure Strategy, the Strategic Spatial Energy Plan, the Circular Economy Strategy and the Industrial Strategy, amongst others. The Comprehensive Spending Review is a crucial opportuntiy to ensure these policies are appropriately resourced.
- The UK industrial decarbonisation policy landscape is complex. Policy levers sit in a range of government departments. This report maps the breadth of business-facing policies relevant to industrial decarbonisation and sorts them into categories based on how they might influence business decision-making.
- **With visionary leadership, enabling policy and decisive investment, the UK can create an enduring ecosystem of low carbon industry**. A thriving UK industrial sector could revitalise regional economies, supply the materials needed for high-growth sectors and new infrastructure, and strengthen UK exports by leveraging a low carbon competitive edge. Left unaddressed, the gaps identified in this brief threaten the success of existing policies, progress on industrial decarbonisation and the UK's industrial competitiveness.

» The policy map points to key gaps where further action from government is required:

Dispersed sites: Policy focus is needed to provide a clearer picture of what infrastructure dispersed industrial sites will have access to and when to inform their investment decisions.

Industrial electrification: Policy intervention needs to reduce high industrial electricity prices, ensure an efficient grid connection process, create an attractive investment environment and protect UK industry from carbon leakage.

Energy and resource efficiency: Greater support for energy efficiency and resource circularity is needed. This could include incentives, standards, catalytic funding and trade focus from the government.

Demand-side measures, such as green public procurement, are key levers to contribute to the business case for investment in industrial innovation, development and commercialisation of low carbon products.

Introduction

Foundation industries and manufacturing are central to the UK's economic growth, social development and cultural identity. They drive the local economy of many regions, with industrial jobs offering higher-than-average pay, and are vital for net zero, supplying the materials needed for infrastructure, the energy system, and the wider economy. **The transition to net zero presents an opportunity to reinvigorate industrial growth** as part of a low carbon, internationally competitive, prosperous and resilient UK economy.

The wider policy environment is a decisive factor in businesses' investments and planning. Successive governments have developed strategies and policies to drive industrial decarbonisation, including the 2021 Industrial Decarbonisation Strategy and Emission Trading Scheme (ETS). Indeed, between 2005-2014 when the UK was a participant, the EU ETS contributed significantly to the direct industrial and fuel supply emissions abatement by encouraging emissions reduction.[1] While progress has been made, **policy uncertainty and chronic underinvestment are hampering the UK's industrial competitiveness** and decarbonisation.

By mapping industrial decarbonisation policies, this brief explores the policy-business interface from a business perspective, identifies key policy gaps, and discusses implications for upcoming government decision-making.

Industry and decarbonisation in numbers

UK industry covers multiple sub-sectors including iron and steel, chemicals, cement and lime, food and drink, glass, paper, other minerals (such as ceramics), non-ferrous metals, vehicles and other industry.

ECONOMIC ROLE

- UK heavy industry and the wider supply chain contribute **£152 billion in Gross Value Added** (GVA) to the UK economy and support over **1.4 million jobs**. When including a broader definition of industry and manufacturing sectors, this rises to over £200 billion.[2] Overall, the UK industry makes up around 21% of the UK's exports, which is comparable to the global average of 22%.[3]
- **Industrial jobs are concentrated outside of London and the Southeast**. In 2023, 28% of total heavy industry GVA and over 400,000 jobs were in the North. In Wales, industry contributes £10.5 billion and 121,000 jobs. Each direct job in these sectors generates more than two additional jobs throughout the economy in indirect and induced employment.[4]

CLIMATE IMPACT

» Industry is the third highest-emitting sector, representing **12% of the UK's total greenhouse gas emissions** in 2023 (51.8 $MtCO_2e$). The Climate Change Committee's (CCC) Seventh Carbon Budget advice suggests that, under their balance pathway, by 2040 industry emissions will have fallen by 78% relative to 2023. This would make industry the fifth highest-emitting sector, accounting for 11.2 $MtCO_2e$.[5]

» Industrial **emissions have fallen by 63% since 1990**. Much of this reduction has been due to a fall in the output of emissions-intensive industrial sectors. This has been particularly the case in chemicals and steel, due to a structural shift towards higher-value and less carbon-intensive industrial activity.[6]

» The CCC's advice asserts that **electrification is the main route to decarbonise industry**, alongside essential roles for carbon capture and storage (CCS) and hydrogen.[7]

ECONOMIC CHALLENGES

» Industry and manufacturing are facing fierce international competition. Other countries, such as China, are outcompeting the UK on energy, land, labour and material costs. Automation and artificial intelligence are also affecting labour in these sectors. Since 1990, the **number of manufacturing jobs in the UK has declined by 47%**.[8]

» The **chemical industry** is the UK's second largest export sector, accounting for 15% of all exports. However, key indicators such as R&D spend, assets, consolidation and closures show the UK chemicals sector is in decline.[9] Meanwhile, the UK **steel sector** faces a global excess capacity in steel making which threatens the viability of the UK steel industry. In 2023, the excess was estimated to be 542Mt, which is over 70 times the size of the UK market. Most of this excess capacity uses high-carbon production methods.[10]

ECONOMIC OPPORTUNITY

» **The potential value of global green trade to be worth £1.8 trillion by 2030**, with a potential £60-170 billion market share for the UK.[11] The UK is the eighth largest exporter of green industrial products in the world.[12]

» **Demand for industrial products is growing globally**. For example, global steel demand is expected to increase by 11% between 2020 and 2030.[13] This growth will increasingly translate to demand for low carbon industrial products as the vast majority of the global economy looks to meet climate targets. Countries

with net zero targets together cover 78% of global GDP.[14] The **demand for green steel is predicted to grow around 2.5 times in the next 5 years.**[15]

- **This presents significant opportunities for the UK**. Businesses in emerging green industrial sectors, such as hydrogen and carbon capture, utilisation and storage (CCUS), turn over £1.7 billion across the UK and are expected to grow at a rate of 20% per year.[16] Additionally, steel accounts for more than 80% of the material required to produce a wind turbine. UK Steel estimates that **offshore wind will need around 25 million tonnes of steel, equating to a potential £21 billion market for UK steel out to 2050**.[17] A lot of this demand could be met by UK businesses if the right policies are implemented.

Mapping industrial decarbonisation policy

Government policy has a crucial role to play by providing a clear direction and enabling conditions for industry to decarbonise. The industrial decarbonisation policy landscape is complex: policy levers sit in a range of government departments, in particular the Department for Energy Security and Net Zero (DESNZ), Department for Business and Trade (DBT) and HM Treasury (HMT).

In Figure 1, the breadth of business-facing policies relevant to industrial decarbonisation have been mapped and sorted into categories, based on how they might influence business decision-making. This approach illustrates both the complexity businesses face and identifies gaps and opportunities for more joined-up policy across Whitehall. Market context means businesses make decisions on decarbonisation alongside other, potentially more immediate concerns and policies.

Industrial decarbonisation comes with **significant technology and cost uncertainty** for both businesses and policymakers. Whilst some sectors may have a clear technological path to decarbonisation, others do not. The switch to low-carbon fuels will also require new infrastructure which lies outside the control of individual businesses. Innovation will impact the available decarbonisation technology and shared infrastructure.

This mapping exercise is not exhaustive and focuses on the main levers at a UK level. Policies held at the devolved, regional or local level were not captured. The figure aggregates some policies for clarity. For example, public funding is not presented with the granularity of individual schemes.

The Annex includes a list of all the policies identified in Figure 1.

Figure 1 shows that industrial decarbonisation is supported by many levers, with additional policies under development. It also highlights key gaps. **Closing the gaps would support investment in decarbonisation, enabling the UK to develop a competitive advantage in producing low carbon goods and exploit the global economic opportunity for green growth.** Left unaddressed, these gaps threaten the success of existing policies, progress on industrial decarbonisation and UK industrial competitiveness. Dispersed sites, industrial electrification, energy and resource efficiency, and demand creation require further action. **The government must act to support a healthy pipeline of skills, infrastructure and transition finance that businesses can access, and investors can support.**

FIGURE 1

A POLICY LEVER MAP: INDUSTRIAL DECARBONISATION POLICY FROM A BUSINESS' PERSPECTIVE

GOVERNMENT STRATEGY

Government strategy provides clarity on the big picture, direction of travel and factors which lie outside of businesses control (e.g. infrastructure).

ENERGY SYSTEM DECARBONISATION

- Clean Power 2030 Action Plan
- Contracts for Difference
- Biomass Strategy 2023
- Centralised Strategic Network Plan
- Strategic Spatial Energy Plan
- Regional Spatial Energy Plan
- Net Zero Hydrogen Fund
- Hydrogen production business model
- Hydrogen net zero investment roadmap
- UK hydrogen strategy → Hydrogen strategy refresh

CARBON BUDGETS

- 2021 Industrial Decarbonisation Strategy → Industrial Decarbonisation Strategy (update expected in 2025/26)
- Net zero strategy → Carbon Budget Delivery Plan

CARBON CAPTURE, USAGE AND STORAGE

- Industrial Clusters Mission
- CCUS: business models
- CCUS net zero investment roadmap
- Cluster sequencing for carbon capture, usage and storage (CCUS)
- The Carbon Capture & Storage Infrastructure Fund

CIRCULARITY AND RESOURCE EFFICIENCY

- Circular economy strategy for England
- Resources and waste strategy for England
- Environmental Improvement Plan

WIDER GROWTH POLICY

- The steel strategy
- UK's modern industrial strategy
- Trade strategy
- Local growth plans
- 10 Year Infrastructure Strategy

PUBLIC FINANCE

Public finance available for low-carbon technologies and supply chains, which can support private investment and address challenges around the high cost of capital.

PUBLIC FUNDING

- Net Zero Innovation Portfolio (£1bn)
- Green Industries Growth Accelerator (£960m)
- Local Industrial Decarbonisation Plans (£6m)
- Made Smarter (£8m)
- Industrial Energy Transformation Fund (£289m)
- Transforming Foundation Industries Challenge (£1.5m)
- Tata Steel Deal in Port Talbot (£500m)
- British Steel Deal in Scunthorpe
- UK Research and Innovation → Sustainable Industrial Futures (£18m) / Transforming Foundation Industries Challenge (£1.5m)
- Made Smarter (£8m)
- Clean Industry Bonus (£200m)
- CCUS spending commitment (£21.7bn)

PUBLIC FINANCIAL INSTITUTIONS

- UK Export Finance
- British Business Bank
- Green Gilts
- Investment Zones in England

BUSINESS OPERATIONS

Policies that support business operations related to decarbonisation, including access to infrastructure, services and workforce.

ELECTRICITY PRICE

- Network and policy charges for businesses
- Renewable Obligation Scheme exemption for Energy Intensive Industries
- British Industry Supercharger
- Renewable Energy Guarantees of Origin
- Electricity market arrangement → Review of the electricty market arrangement (REMA)

ACCESS TO ELECTRICITY SYSTEM

- Planning system
- Connections Action Plan (Transmission)

SKILLS

- The Office for Clean Energy Jobs
- Skills England
- Apprenticeship Levy → Growth and Skills Levy

OTHER INFRASTRUCTURE

- Hydrogen backbone
- CCUS infrastructure
- Decarbonisation of transport including freight and HGVs

COMPLIANCE AND REPORTING

Reporting requirements and regulatory frameworks which businesses must comply with.

CARBON PRICING

- Carbon Price Support
- Carbon Border Adjustment Mechanism
- UK Emission Trading (ETS) Scheme → ETS reforms

REGULATION

- Best available techniques (BAT)
- Conformity assessment and accreditation policy in the UK
- Minimum Energy Efficiency Standards (MEES)
- Energy Information Regulations
- Compliance with other regulation e.g. safety and environmental protection
- Ecodesign for Energy-Related Products Regulations

PUBLIC PROCUREMENT

- National Procurement Policy Statement
- The Government Buying Standards

REPORTING

- Energy Savings Opportunity Scheme (ESOS)
- Combined Heat and Power Quality Assurance Programme
- Transition Plans
- Task Force on Climate-Related Financial Disclosures
- Streamlined Energy and Carbon Reporting

FISCAL POLICY

Taxation and other fiscal measures that incentivise business investment and action on decarbonisation.

ENVIRONMENT

- Full expensing
- Climate Change Levy → Climate change agreements

BUSINESS RATES

- Green technology relief
- Business rate reform
- Improvement relief

LOCATIONAL SUPPORT

- Freeports
- Investment Zones in England

INNOVATION

- Capital allowances
- Research & Development tax credits

KNOWLEDGE SHARING

Initiatives to facilitate the exchange of information, expertise and collaboration

- Catapult Centres
- Industrial clusters
- Knowledge Transfer Networks
- Local Enterprise Partnerships
- Trade Associations
- Industrial Decarbonisation Research and Innovation Centre
- Transforming Foundation Industries Research and Innovation Hub

KEY

- *Policies and institutions*
- *Policies announced and under development*

GAPS

Policy areas where significant barriers for businesses remain.

DISPERSED SITES

Dispersed sites make up over 50% of all industrial greenhouse gas emissions but have received less policy attention than industrial clusters. A tailored approach is needed that reflects the diverse characteristics of dispersed sites.

INDUSTRIAL ELECTRIFICATION

Industrial electrification could deliver 57% of emissions reductions needed by industry in 2040. However, electrification has lacked policy attention and large barriers remain to businesses.

DEMAND SIDE MEASURES

Market demand for low-carbon industrial products is nascent but has huge potential to grow. Green demand-side policy measures could support the business case for investment in industrial innovation and the commercialisation of low carbon products.

ENERGY & RESOURCE EFFICIENCY

Enhancing energy and resource efficiency can help reduce emissions, costs and environmental impact but requires substantial upfront investment. Greater policy emphasis and support on efficiency is needed.

Gaps

Industrial decarbonisation policy needs to support the alignment of market priorities. It must also reduce unintended consequences and drive effective and efficient decarbonisation. Where policy levers affect the system unevenly, it can introduce uncertainty while increasing risks to and delaying decarbonisation.

Figure 1 maps the range of policies a business might interact with as part of its decarbonisation journey. This helps to identify key policy gaps where barriers for businesses remain unaddressed. When determining potential solutions, it is important to consider how policies can align along value chains and with business considerations, including access to raw materials, trade, supply chains, skills and market demand. This systems-level thinking can help reduce negative unintended consequences and tackle challenges that individual businesses cannot overcome.

Figure 2 presents an illustrative steel value chain and exemplifies how the policy gaps influence the system. The government recognises steel as a strategic industrial subsector, with potential growth opportunities for low-carbon steel. The steel sector has a range of decarbonisation routes including electrification, hydrogen and energy and resource efficiency. In additional to the decarbonisation policies identified in Figure 1, the government is developing a Steel Strategy and has identified steel as a key sector for support from the National Wealth Fund.

Gap 1: Dispersed sites

Industrial clusters are characterised by shared infrastructure in close proximity across multiple sectors, typically built up around significant iron and steel, chemicals, or oil & gas refining sites. There are six major industrial clusters in the UK. Dispersed sites are defined as those located more than 30 km from one of the large industrial clusters.[18] Compared to sites situated in clusters, **dispersed industrial sites tend to have lower access to shared infrastructure and knowledge-sharing networks**.[19] If they are unable to access low-carbon energy and pipeline CO_2 transport, dispersed sites may need to consider on-site deep decarbonisation options, transport of low-carbon fuels and CO_2, or site-specific connection to the energy network. They may even need to consider relocation.

Dispersed sites will need access to electricity, hydrogen, and CCUS infrastructure. Existing uncertainty on **infrastructure feasibility, access and government funding support** is paralysing business and investor decision making. Providing greater clarity should be a central aim of upcoming government strategy and spatial energy planning.

FIGURE 2

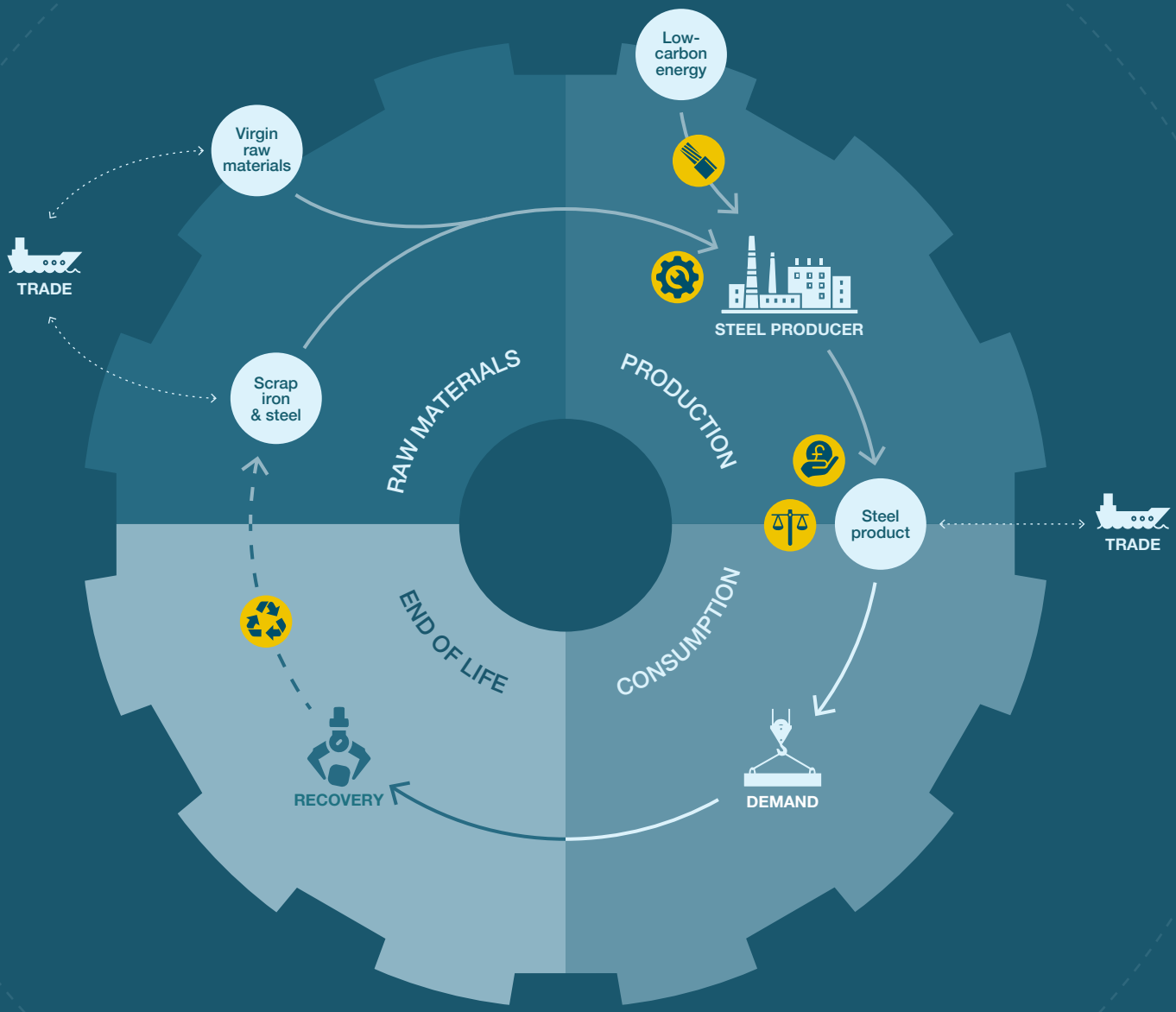
DECARBONISATION POLICY GAPS IN PRACTICE:
STEEL AS AN EXAMPLE. THE GRAPHIC ILLUSTRATES POLICY GAPS ACROSS THE STEEL VALUE CHAIN

DISPERSED SITES

Most UK steel sites are in or near industrial clusters. However, some sites, such as the Rotherham Liberty Steel site, are dispersed and may face additional challenges compared to clusters, in particular access to **infrastructure**. For example, clarity on access to green hydrogen, including pipelines and transport, is needed.

INDUSTRIAL ELECTRIFICATION

Electrification could provide 96% of the carbon abatement required by the steel sector.[A] High electricity and **capital costs** are challenges which require policy support to overcome For example, UK steel producers are paying up to 50% more for electricity than French and German competitors despite the introduction of the British Industry Supercharger.[B] **Skills** support and retraining may also be needed.



ENERGY & RESOURCE EFFICIENCY

Scrap steel is a key input for electric arc furnaces and scrap consumption from the steel sector could nearly treble by 2050, increasing up to 7Mt per annum. The UK produces approximately 10-11Mt of scrap steel each year and 80% of this is exported.[C] Intervention to support resource **circularity** is vital.

DEMAND SIDE MEASURES

Public procurement for steel is estimated to be worth £4.3 billion over the next decade, with potential to drive demand for low-carbon steel.[D] A challenge to overcome is the lack of single agreed low-carbon steel **standard** to include in procurement. **A level playing field** with high-carbon products is also needed, with the Emissions Trading Scheme and Carbon Border Adjustment Mechanism.

A. Climate Change Committee, 2025, The Seventh Carbon Budget: Advice for the UK Government.

B. UK Steel, 2024, Industrial electricty prices: a barrier to growth, competitiveness and profitability.

C. UK Steel, 2023, Steel Scrap: a strategic raw material for net zero.

D. UK Steel, 2024, Unlock multi-billion pound opportuntiy in steel procurement reforms.

At present dispersed sites are receiving less policy attention and require a tailored approach that reflect the diverse characteristics of dispersed sites.[20] Industrial clusters are the focus for the initial development of CCUS and hydrogen infrastructure. Dispersed sites face huge uncertainty around future costs and access to these decarbonisation routes in their current location. For those dispersed sites requiring CCUS to decarbonise, availability and cost of non-pipeline transportation of CO_2 will be important and is currently uncertain, with a government consultation expected this year. Dispersed sites may also face greater electrification challenges than clusters. Research by the UK Energy Research Centre (UKERC) found that, without significant investment, increased electricity demand across all sectors could be significantly constrained by distribution network capacity by 2030. 42% of large industrial sites could be constrained in 2030, increasing to 77% in 2050. Most of the constrained large industrial sites identified in this study were dispersed sites. The current regional pattern of grid constraints is due to complex interactions between existing grid capacity and future electricity demand. Current policy focuses on the grid capacity requirements of industrial clusters; however, dispersed sites – which account for more than half of all industrial greenhouse gas emissions – also require significant attention.[21]

The government must support local coordination and greater synergy with other local decarbonisation needs. For example, a dispersed site proceeding with electrification may offer opportunities for other local users if the local distribution network is being reinforced. Also, dispersed sites with waste heat should be prioritised for **heat network development** as some will be close to heat demand. Heat storage infrastructure can be shared too. Coordination between the development of **local area energy plans, local growth plans and the regional energy strategic plans (RESPs)** could help to identify opportunities for the wider local economy as they emerge from the decarbonisation of dispersed industrial sites.

As clarity on infrastructure access improves, **tailored policy may be necessary to support the decarbonisation of dispersed sites** and increase uptake of options available to those businesses. For example, sites may need support on finance or skills to adopt technology. Local authorities may require guidance to ensure national energy planning and decarbonisation policy translates into local planning permission for infrastructure at industrial sites, such as on-site energy generation and the strengthening of distribution networks and connections. Knowledge networks on decarbonisation can support expertise and lesson-sharing across different dispersed sites or in a local area.

Upcoming policy opportunities for dispersed sites

- The renewal of the **Industrial Decarbonisation Strategy** must include specific consideration of dispersed sites and tailored policy recognising the barriers those sites face. The Strategy will need to be appropriately resourced, including public financial support which may be needed to address capital expenditures (CapEx) and operational expenditures (OpEx) challenges.
- The **Infrastructure Strategy, Strategic Spatial Energy Plan**, and **Regional Strategic Energy Plan** must provide clarity and accessible information for businesses that operate dispersed industrial sites in order to ensure they can understand the decarbonisation pathways available to them and when and where low-carbon fuels and electricity will be available. To facilitate the decarbonisation of dispersed sites industrial energy demand must inform spatial plans and tailored policy support.
- **Planning and connections reform** needs to ensure ease of access to the distribution grid. Policymakers must consider and plan for connection requirements and grid capacity needs of dispersed sites. The connection process must be delivered well with clear communication and process management from network operators.[22]

Gap 2: Industrial electrification

The CCC found that electrification could deliver 57% of emissions reductions in 2040 required by industry to be in line with the UK's net zero pathway.[23] Industry already uses large amounts of electricity to power equipment and therefore, most of the decarbonisation potential of electrification comes from the increased use of electricity for heat processes. Developed in 2024, two of the three National Energy System Operator (NESO) Future Energy Pathways for industry suggest that industrial electricity demand will increase. For example, the Electric Engagement pathway presents a substantial 63% increase by 2050.[24] Electrification also presents advantages such as an established technical knowledge base and existing infrastructure. It is the most energetically efficient way to provide zero-carbon heat to industrial processes and so should be supported where possible to replace industrial fossil fuel use.[25]

Access to low carbon electricity is essential for industrial electrification to deliver its decarbonisation potential. Existing progress towards a decarbonised electricity system and the 2030 Clean

Power mission can constitute a major competitive advantage to the UK in the race to leverage green growth. A clean power system can also help to insulate industry from energy security risks, such as gas price shocks; a recent study predicts that hitting the UK's clean power by 2030 target could reduce the volatility of electricity markets by 44%.[26]

However, industrial electrification has lacked policy attention and barriers remain to businesses that pursue electrification. First, businesses need **more clarity on the decarbonisation options** that will be available to them.[27] Hydrogen is a decarbonisation option for industry, but significant uncertainty remains about when, where and at what cost hydrogen will be available. This uncertainty is higher for industrial businesses outside major clusters. There are also some sectors with high temperature demand, such as cement and ceramics, where electrification is more technically challenging and other decarbonisation options may be more feasible. Combined heat and power (CHP) is another area where greater clarity will be valuable, from example on the role of heat pumps for the heat component and access to electricity to meet the demand.

The **high cost of electricity** and **the substantial upfront costs** for electrifying industrial sites are major barriers to electrification, impacting competitiveness against conventional higher carbon processes and electrified industry in other countries. The CCC found that industrial electricity costs need to be reduced relative to the price of gas to deliver their Balanced Pathway.[28] Increased industrial electrification would also place increased demands on the electricity grid and require infrastructure changes.[29]

Electricity cost, availability and impact on business operations

The UK has some of the highest industrial electricity prices in the world. For example, UK Steel found UK steel producers face prices 30% higher for electricity in 2024/25 than in Germany and 50% higher than in France.[30] Competitive industrial energy prices are a prerequisite for growth in tandem with decarbonisation. The government is currently **reviewing the electricity market arrangements (REMA)**, and a decision is expected in summer 2025. Depending on the outcome of REMA it will likely impact industrial businesses' competitiveness and progress on electrification, however, is unlikely to bring down industrial electricity costs in the short term.

Industrial sites need **access to electricity networks** to be able to electrify their operations, and this may require network strengthening and/or new connections. Recent modelling by UKERC has highlighted the risk of network constraints hampering industrial electrification or introducing delays.[31] Geographic disparities in access to electricity or regional variation in electricity prices could introduce risks to the competitiveness of certain sites or delays to decarbonisation.

The government needs to take decisive action to reduce industrial electricity prices relative both to the UK gas price and to electricity prices in key competitor nations. **UK industry has differing challenges and needs depending on the sub-sector and it will be important the government understands nuances and tailor interventions where needed.**

Power Purchase Agreements (PPA): The government could further support the clean PPA market by underwriting PPAs and providing support with guidance and standardised contracts. Without such action, the use of PPAs will continue to be limited to certain businesses. For example, in the chemicals sector's very high power demand means a limited proportion of PPAs are based on renewable energy. In the steel sector, the use of PPAs is small, in part due to uncertainty around future plant viability, which precludes long-term contracts.[32] Energy UK has suggested additional solutions, such as exempting PPA buyers from renewables Contracts for Difference (CfD) costs and allowing PPAs to be set against Climate Change Agreement targets.[33]

- **British Industry Supercharger (BIS)**: the BIS reduces network charges and provides exemptions from electricity costs for businesses in some energy-intensive sectors. The government could further increase the maximum exemption from 60% to 90%, bringing UK network charges closer to those in key European countries. The government should consider reviewing the current policy and the actual costs different sectors face to ensure the policy fulfils its purpose and supports decarbonisation. For example, BIS support could be based on the actual electricity price paid by businesses or where access to PPAs is limited.
- **Reducing policy costs**: Most of the policy costs incurred by non-domestic consumers are allocated to electricity, leading to an artificial increase in its price and making electrification a less feasible option. To make electrification more competitive across industry, levies could be rebalanced, with more costs funded through general taxation, gas bills or a blend of both. The rebalancing of costs must be done in a way that aims to avoid or mitigate unintended competitive distortions, as some companies will not be able to electrify and others in areas with a constrained grid will not be able to take immediate advantage of cheaper electricity. It is worth noting that this measure is already applied to those businesses eligible for the BIS and would therefore not contribute further to making electrification more competitive for those electricity-intensive sectors.
- **Support to develop business models for electrification**: Government supported business models can help play a de-risking role. Feed in tariffs and CfDs have helped technologies scale and the costs to come down. Lessons can be drawn from the development of other business models, such as for renewable energy, hydrogen and CCUS, as well as from other countries. For example, Germany has introduced a carbon CfD for energy-intensive manufacturing. The scheme is technology neutral. Eligible projects need to achieve 60%

emissions reduction in three years and 90% emissions reduction in 15 years compared to the best available conventional technologies based on EU Emission Trade Scheme (ETS) benchmarks.[34] A separate scheme may be needed to support SME electrification as long-term CfDs may not be suitable.[35] Germany has developed a Federal Funding Industry and Climate Protection scheme aimed at SMEs. Consideration will also need to be given to eligibility and scaling of business models for electrification, to ensure they contribute towards electrification becoming commercially competitive across the board.

For some businesses, onsite renewable energy generation and storage would provide a route to accessing renewable energy without further requirements from the local network or associated network and policy costs. The government should explore where there are opportunities to reduce barriers to businesses investing in on-site generation.

Capex support

Electrification is a substantial upfront investment. Tata Steel's conversion of their Port Talbot site to an electric arc furnace is set to cost £1.25 billion while the electrification of James Cropper paper mill is projected to run to £8.7 million.[36] Investment is unattractive because the capital cost is higher relative to natural gas technology and there are costs associated with retiring incumbent technology early.[37] The wider challenges for electrification, such as high industrial electricity prices and grid connection uncertainty, make it even riskier to secure investment. Using public funding, the government can help to unlock private investment by utilising:

- **Public funding**: While some grants exist to help fund electrification, these may not be accessible or at the scale required for substantial electrification projects. Businesses of all sizes can find the public funding landscape challenging to navigate: there are multiple funds, complex application criteria and processes, and short timelines. The limited scale of funding available may also be unsuitable for some businesses. **The government should look to better coordinate or aggregate public funds and grants while focusing on scaling successful models**. For example, the Industrial Energy Transformation Fund (IETF) funds electrification, alongside other decarbonisation measures, and is viewed positively by businesses for its technology neutrality. So far, around £40 million has been allocated to electrification projects through the IETF.[38] However, in December 2024 the government cancelled the next promised round of funding. The scheme should be improved and renewed, with an easier application process, or alternative mechanisms should be introduced to financially support industrial electrification.
- **Public finance**: Strategic public investment can help accelerate industrial electrification. It could target large-scale and higher-risk projects which struggle to attract private investment alone. **Blended finance** can tackle market failures in industrial decarbonisation.

Government co-investment in electrification reduces overall borrowing costs, making the investment more attractive. The **National Wealth Fund** could reinvigorate foundational industries beyond steel.

Innovation

Some electrified technologies that could replace fossil technologies have not yet been fully developed or commercialised.[39] **A strong signal from the government on the increased potential for electrification, combined with public research and development funding or support, would encourage private sector investment** and create opportunities for new, innovative processes.

Upcoming policy opportunities for driving electrification

- The next iteration of the **Industrial Decarbonisation Strategy** and updated **Carbon Budget Delivery Plan** must set out how policy frameworks will enable the electrification of industry. This is necessary to provide clarity to businesses on the options available to them, including electrification, hydrogen and the timelines.
- The second phase of the **Spending Review** is due to be completed in June 2025. It must address industrial electricity prices and provide support with grants and public finance for industrial electrification.
- Industrial electrification must be included in the analysis and plans for the decarbonisation of the energy system, including the **10-year Infrastructure Strategy, Strategic Spatial Energy Plan** and **Regional Strategic Energy Plan** which need to consider the geographic location and needs of industrial energy users.
- The government has published a summary of responses to their consultation on **'Enabling industrial electrification'** but not yet committed to next steps. The government needs to provide clarity on the enabling policy measures that they intend to implement and the proposed timeline.

Gap 3: Energy and resource efficiency

Enhancing energy and resource efficiency **reduces emissions, environmental impacts**, and **costs for businesses**; supports more **resilient supply chains**, and increases **productivity**. Innovation in efficiency is an opportunity for the UK to increase competitiveness.[40,41] Flexibility in operations also provides benefits to businesses able to maximise their energy use in periods of lower cost and has the potential to generate wider system benefits. As the National Energy System Operator's advice to the government shows, efficiency will also help to achieve the Clean Power mission and reduce peak demand.[42] The National Infrastructure Commission highlighted that heavy industry could have a role in managing energy system flexibility and that demand flexibility could reduce the cost of distribution network investment by around 15%, cumulatively saving £6.7-7.9 billion by 2050.[43] More work is needed to understand how this potential could be realised without negatively impacting production, and how targeted support may be needed for those processes where flexibility is not an option.

The CCC's Seventh Carbon Budget suggests that **resource and energy efficiency will respectively account for 7% and 6% of emissions reductions in 2040**.[44] Existing policies that incentivise business investment in efficiency measures, such as the Climate Change Levy and Climate Change Agreements (CCA), have seen some success. For example, carbon emissions were reduced by 8.4% in facilities covered by CCAs in 2021-22.[45] However, the scale of further efficiency gains required, and associated innovation adoption, necessitates further action.[46]

The business case for energy efficiency can be hard to make for prospective corporate investment. Some businesses, particularly smaller ones, may struggle to innovate or adopt efficiency solutions due to the data, digital systems and skills needed. Some efficiency measures present a significant initial capital cost, which can deter investment. In the context of wider uncertainty on the technology pathways for industrial decarbonisation, the need to make the business case for efficiency improvements is especially challenging. For example, efficiency measures may only apply in the short term if the business then changes its processes to decarbonise.[47] Furthermore, the UK high power prices have been a barrier to investment in energy efficiency measures, with investment going to the more cost-competitive markets.

Incentives and support from the government make the business case for efficiency more attractive and can unlock private investment. Measures could include product and manufacturing standards, regulation, fiscal incentives, revenue support mechanisms and public funding. Public funding will be most effective if broad support is available which addresses

challenges with high capital costs, innovation and digital skills. For example, the **Made Smarter** initiative has achieved positive outcomes by providing both funding and skills support to SMEs. The Institute for Manufacturing found that 97% of firms that had adopted digital technologies reported benefits, from improved efficiency to cost reductions.[48]

Materials circularity is another avenue to increasing industry efficiency, while reducing environmental impact and supporting security of supply. Sectors such as glass and steel are increasingly using scrap to supplement raw material inputs, and further innovation is creating new opportunities. For example, steel-producing electric arc furnaces could be used to recycle cement simultaneously.[49]

Uncertainty over the availability and quality of **scrap material** is limiting the adoption of more circular production models, with around 80% of UK steel scrap currently exported.[50] Business action is unlikely to increase without enabling policy. A significant body of existing work can inform further policy development. This includes the current waste and resource strategy and the research DESNZ undertook on 'Unlocking resource efficiency,' as well as the subsequent business feedback.[51]

As UK trade partners like the EU increase ambition on circularity and decarbonisation, there are increasing **export opportunities for low carbon and circular products**.

Upcoming policy opportunities for driving energy and resource efficiency

- The renewal of the **Industrial Decarbonisation Strategy** provides an opportunity to emphasise efficiency improvements and circularity. The Climate Change Committee's seventh Carbon Budget advice on the role of energy and resource efficiency for decarbonisation and the Clean Power Action Plan should inform the Strategy too.
- The **Circular Economy Strategy**, which is currently under development, must enable greater resource efficiency in industry. This would not only support decarbonisation but also strengthen UK security of supply for key materials. A focus on industry in the strategy and accompanying sector roadmaps will provide an exemplar for maximising the reuse and remanufacture of industrial materials. It could also reflect the full economic and environmental benefits of secondary materials. This would drive the expansion of recycling infrastructure and incentivise waste management companies to supply materials to UK industries instead of exporting them. Industrial clusters could be used to deploy pilot innovative resource efficiency models, including the use of by-products and re-use of materials.
- In the upcoming **Trade Strategy**, the government should emphasise the value of a closer trade relationship with the EU to maximise export opportunities for energy efficiency and circular UK industrial products. Accredited conformity assessment, in line with international standards, plays a key role in enhancing the export potential for low carbon industrial products as it creates confidence in the validity of performance and environmental claims relating to such products.

Gap 4: Demand-side measures

Government decarbonisation policy has focused on driving innovation and incentivising action from the producers of industrial products: the supply side of the value chain. However, business investment decisions are also driven by market demand. Low-carbon products are often novel and priced at a premium, which affects their price competitiveness with higher-carbon products. For example, a new truck tyre can have up to six lives with regrooving and retreading, but it must be designed for multi-lives, which

comes at an initial higher cost affecting competitiveness, despite lower lifetime costs. Regulatory pressure, such as the UK ETS, which is applied to producers, is not complemented with market demand drivers. Market demand for low-carbon industrial products is currently relatively small and does not yet offer a sufficient market pull to scale low carbon products, with scale supporting cost reductions.

However, with net zero commitments here and internationally, demand will grow. **The government needs to introduce policies to increase domestic demand and quickly scale up domestic supply chains** to capture the competitive advantage and increase resilience. Green demand-side policy measures can strengthen the business case for investment in industrial innovation and the development and commercialisation of low carbon products. Other jurisdictions are taking such measures forward. For example, the EU Clean Industrial Deal announced in February 2025 includes demand side measures, with support for carbon intensity content labels for industrial products, tax incentives and other schemes.

Some businesses have shown leadership, creating **voluntary commitments** to procure low-carbon products and instating off-take agreements with producers. This has enabled producers to attract investment into low-carbon production facilities. For example, the First Mover Coalition (FMC) is a group of companies working to scale innovative low-carbon technologies by creating market demand. In 2023, FMC member Ørsted agreed to procure steel wind turbine towers and blades made from recycled materials from Vestas in joint offshore wind projects.[52,53] There is also an opportuntiy for collective procurement where businesses collaborate on procuring low carbon products.

However, the demand signal from private sector leaders has not been sufficient to attract the scale of investment needed for widespread low-carbon production. Data published in 2024 from the Industrial Transition Accelerator and Mission Possible Partnership found that, whilst the global pipeline of industrial decarbonisation projects is increasing, fewer than 20% are operational or have secured the necessary financing and approvals to commence construction. At the current pace, it would take approximately 35 years for the remaining facilities to move into construction.[54] Not all businesses can be first movers, with buyers unable to commit to long-term offtake agreements at scale due to the significant availability of cheaper higher carbon products. Cyclically, the lack of incentives to switch mean buyers are often unable to commit to long-term offtake agreements at scale.[55]

A focus on demand stimulation would help to scale up markets for low carbon products and improve their competitiveness with high carbon products. Guaranteed downstream demand for low-carbon goods could **support more rapid cost reductions** through learning-by-doing and market competition effects. Modelling by Cambridge Econometrics found that demand-led innovation for cement would bring down prices faster and

lead to higher output and employment with minimal trade-offs, despite prices being initially more expensive.[56]

Policy intervention is needed to provide businesses and financial institutions with the certainty needed for long-term investment and create a level playing field. Demand-side policies can be especially important for SMEs developing innovative low-carbon industrial materials and products that are less established, and which struggle to attract scale-up investment. Low-carbon products also present export opportunities, especially to countries pursuing decarbonisation and introducing carbon border adjustment mechanisms (CBAMs) or carbon taxes which will increase the competitiveness. Energy & Climate Intelligence Unit analysis of UK export partners found that there were particularly opportunities for UK exports in green steel and low-carbon fertiliser.[57]

Green product standards ensure the market is robust and trustworthy. These standards can require products to achieve a specified level of energy efficiency, carbon emissions, recycled content or measures of other environmental factors. The design of green product standards is complex and requires extensive engagement between independent standards bodies and industry. Ensuring that products and related claims conform with specific standards relies on robust, independent assurance mechanisms, such as those provided by accredited certification, validation and verification. **Standards and accreditation therefore play a key role as effective and efficient market-led mechanisms for the delivery of government policies**, in this case for low carbon industrial products. They build consumer and supply chain confidence while enabling innovative products to reach the market more quickly, reducing the need for regulatory intervention and frequent change. The government has a role in ensuring the link-up between finance policy and compliance and reporting policy. For example, ensuring the insurance sector plays a supportive role in the use of standards and adoption of low carbon products.

Product standards can be supported by product labelling to inform consumer choices. Industry sectors and the government should work together on unified standards, where appropriate, as well as adoption and wider consumer confidence. Maximising alignment with emerging EU standards, where possible, will reduce the complexity for businesses.

Standards need to be mandated to have a meaningful impact on reducing emissions.[58] Frontier Economics found that voluntary product standards are unlikely to produce the significant change needed to establish markets for low-carbon industrial products. **Mandatory product standards** (MPS), a form of regulation, would create a level playing field for low-carbon products and provide a clear investment signal. Success depends on well-designed standards and carefully considering how to roll them out to support business compliance.

Another powerful but under-used lever at the government's disposal is **public procurement**. In 2021/22 £329 billion was spent on government procurement, accounting for a third of public sector spending.[59] Public procurement in the UK accounts for around 9% of steel and 24% of cement demand.[60] Across many products, services, and sectors, public procurement can drive widespread adoption of good practices and standards for climate and nature. Similarly, demand from public procurement can support the scale-up of supply chains for products and services. This would reduce costs and help the competitiveness of nature-positive, low-carbon, and circular economy products and services, generating impact beyond the government's public procurement portfolio. At present, green public procurement is underused: public institutions employ different green standards and skills gaps remain in procurement teams.

Government has already taken positive steps, such as the update of the National Procurement Policy Statement to include net zero, the requirement for all major public projects to undertake whole-lifecycle carbon assessments and the use of the Building Research Establishment Environmental Assessment Method (BREEAM) standards, which encourage the use of low-carbon materials. The full potential of public procurement remains untapped and must increase in ambition and practice.[61]

Upcoming policy opportunities for driving demand

- The government is introducing reforms to public procurement, including the recent update of the **National Procurement Policy Statement**. These reforms must enable increasingly green procurement and support demand growth for low-carbon products and services in industrial sectors.
- The government has committed to release a **voluntary product standards consultation** this year, which is an important step in the development of standards for low-carbon products.
- Further opportunities for the government to incentivise private sector demand for low-carbon products include the upcoming **Infrastructure Strategy, Clean Power Action Plan** and **house-building target**. The **Clean Industry Bonus** for Allocation Round 7 includes incentives to grow low-carbon supply chains for renewable energy projects. It will be an important opportunity to learn lessons and expand to other procurement opportunities.
- The government's commitment to align the **Trade Strategy** with the **Industrial Strategy** is important. The EU is a vital market with strong climate commitments. To seize potential export opportunities, closer, smoother trading relations with the EU are essential.

Beyond the gaps: creating an enabling business environment

The diagram (Figure 1) illustrates the wide range of policies that influence business decarbonisation. However, the wider policy, regulatory and market environment also affects business decisions and investments. Of these 'horizontals', infrastructure, access to finance, access to skills and supply chains, and a level playing field for low-carbon goods are critical enablers for industrial decarbonisation and low-carbon industrial growth.

Skilled people and supply chains are at the heart of low-carbon industrial growth. The adoption of low-carbon industrial processes and digital technologies demands new skills and businesses may face supply chain constraints or bottlenecks as global demand increases for low-carbon processes. The UK has a history of underinvestment and now faces skills shortages: UK employer investment in training and development has fallen by 28% in real terms since 2005.[62] Industry will be competing with other sectors to attract talent. Industrial sites may also face additional supply chain and workforce challenges as they stop or scale-down production while introducing new equipment and processes to decarbonise their operations. For example, Tata Steel's replacement of blast furnaces with an electric arc furnace technology at their site in Port Talbot has halted production until 2027.[63] The government has an important role in education and training policy. It can also support those businesses, such as SMEs, less able to invest in training.

Infrastructure is essential to business operations and often lies outside the control of individual businesses. As described in the policy gaps analysis, uncertainty on timelines and geographic distribution of electricity, hydrogen and CCS infrastructure is a barrier to industrial decarbonisation. Beyond providing clarity, the government must ensure plans for new infrastructure are delivered in practice and at pace via a well-functioning planning and permitting system.

In the case of electricity infrastructure, industry requires better access to a strengthened distribution network. Connecting to the electricity grid can be slow and costly process which disincentivises electrification.[64] The CCC found that the time required to upgrade electricity distribution grid connections must be reduced.[65] Progress requires Ofgem and distribution network operators to take action on simplifying the process, improving customer service for businesses seeking connections, capturing better data, increasing consistency and transparency around connection charges, and better managing of the queue to connect to the grid.[66]

Businesses which rely on hydrogen and CCUS for decarbonisation need clarity on the development of infrastructure, such as pipelines and transport options. These technologies are not yet commercially available, and government must maintain momentum for CCUS and hydrogen development. CCUS and hydrogen present growth opportunities for the

UK, but uncertainty on price, supply, and storage hinder investment. The government can unlock investment by identifying the next wave of projects and clarifying how, when, and by whom they will be funded.

The government and the finance sector can help to deliver the **finance** industry needs to decarbonise. **Transition finance** is any form of financial support that helps decarbonise existing high emitting activities. Currently, many low-carbon technologies are not yet competitive with fossil-based conventional alternatives. There is a lack of suitable financing options because of the scale of capital investment required; World Economic Forum estimates that decarbonising the world's most emissions-intensive industries will require £13.5 trillion in investment to 2050.[67] Policy and political uncertainty discourage higher risk investment. As a result, there is mismatch between projects' investment risk-return profiles and expectations of investors.

Strategic public investment can help de-risk investments and lower the cost of capital until low carbon technologies are more commercially mature. Frameworks and structures to invest, supported by the government, could build investor confidence. A green taxonomy would support transparency and reduce the risk of greenwashing, which is currently a high barrier to investment. Transition plans from corporates would also provide the information investors need to invest in a company's net zero transition. Public finance institutions, such as the National Wealth Fund, must take an active role in reducing friction for private investment. The Transition Finance Market Review sets out recommendations to enable the growth of transition finance, including a Transition Finance Lab for the collaborative design of novel finance schemes.[68]

A level playing field for low-carbon goods and services is critical to reduce the risk of carbon leakage and competition from high-carbon products. The UK ETS and the upcoming UK CBAM are the primary mechanisms in place and must fulfil their purposes effectively. Regulating in reference to international standards and globally recognised means of assuring these standards are met (such as accredited verification and validation) enables the robust and consistent evaluation of carbon emissions data and reports, thereby reducing technical barriers to trade and lowering the burden for businesses that arise from the need to comply with different schemes. The EU accounts for 41% of UK exports in 2023;[69] **linking the UK ETS and UK CBAM to equivalent EU schemes** could ease compliance for UK companies exporting to the EU, reduce trade friction and improve liquidity and price stability in the ETS.

Finally, whilst low-carbon alternatives are available for some industrial processes, this is not the case for all.[70] Technologies are still in development and gaps must be addressed with further **research and development** to make progress towards mitigation of all industrial emissions.

Conclusion

2025 is a major year for industrial decarbonisation. The government's spending review and policy pipeline creates many opportunities to address policy gaps, drive investment and enable industry to meet future carbon budgets. Tackling climate change and restoring our natural environment are fundamental to creating a resilient and competitive economy. Businesses recognise this and are acting on it, but they need the right policy landscape and regulatory framework. The UK government must capitalise on the opportunities of the transition to galvanise sustainable industrial growth and international competitiveness.

Annex

The policies identified in Figure 1 are listed in this annex with additional information where relevant.

Strategy

- The **Net Zero Strategy** (Carbon Budget Delivery Plans) is under development and due to be published for Carbon Budgets 6 and 7 in 2025. The Climate Change Committee has published advice to the government.
- **Industrial Decarbonisation Strategy**, published in 2021, presented delivery targets, the role of different technologies and a policy framework.
- **Industrial Decarbonisation Plan** is due to be publish in 2025 and will provide an updated plan for the Industrial Decarbonisation Strategy.

Wider growth policy

- **Invest 2035: the UK's new Modern Industrial Strategy** will set out industrial growth plans and the government intervention to support it. The publication date is expected to align with the Comprehensive Spending Review in 2025.
- **Steel Strategy** (under development)
- **Trade Strategy** (under development)
- **10-year Infrastructure Strategy** (under development – the working paper presents the government's initial thinking)
- **Local growth plans** (under development)

Energy system decarbonisation

- **Clean Power 2030 Action Plan**
- **Contracts for Difference**
- **Strategic Spatial Energy Plan** (under development)
- **Centralised Strategic Energy Plan** (under development)
- **Regional Spatial Energy Plan** (under development)
- **Biomass Strategy**
- **UK hydrogen Strategy**
- **Hydrogen production business model**
- **Hydrogen Net Zero Investment Roadmap**
- **Net Zero Hydrogen Fund** (£240 million) ends in 2025

Carbon capture, usage and storage (CCUS)

- **Industrial Clusters Mission**
- **CCUS Cluster Sequencing**
- **CCUS: business model**
- **Carbon Capture and Storage Infrastructure Fund** (£1 billion) ends in 2030
- **CCUS Net Zero Investment Roadmap**

Circularity & resource efficiency

- **Circular Economy Strategy** (under development, expected in 2025)
- **Resources and Waste Strategy for England**
- Environment Improvement Plan (under review)

Operations

Electricity price

- The **British Industry Supercharger** is a measure to cut network charges and provide exemptions from electricity costs for firms in some energy-intensive sectors. Eligible energy intensive industries will save an estimated £320 million – £410 million in 2025.
- **Network and policy charges for businesses**
- **Renewable Obligation Scheme exemption for energy intensive industries**
- The government is currently **reviewing the electricity market arrangements (REMA)** to inform the development of a new market framework as the energy system decarbonises. REMA encompasses non-retail aspects of electricity markets, focusing on facilitating the balancing of supply and demand of electricity, and the policies that are meant to incentivise investments in the assets that generate or use electricity. More specifically, the scope of REMA includes the Balancing Mechanism, ancillary services, the Contracts for Difference (CfD) scheme, and the Capacity Market (CM). Other topics like retail market changes, hydrogen, and long duration storage are the focus of other, parallel workstreams.
- **Renewable Energy Guarantees of Origin**

Access to electricity system

- The **Connections Action Plan** will aim to improve the grid connection regime for connecting to the transmission grid. The plan was published in 2023, with further policy action expected in 2025 following the publication of the Clean Power 2030 Action Plan. This plan does not cover connections to the distribution networks.
- Businesses must proceed through the **planning system** in some cases to gain permission to build new energy infrastructure or connections to the grid.

Other infrastructure

- **Hydrogen backbone** (under development)
- **CCUS infrastructure** (under development)
- **Decarbonisation of transport including freight and HGVs** (under development)

Skills

- **Skills England**
- The **Apprenticeship Levy** is a tax on large employers used to fund apprenticeship training. The government has committed to reforming the levy into the **Growth and Skills Levy**.

Tax arrangements

Environmental tax

- **Climate Change Levy** is an environmental tax charged on the energy that businesses use.
- **Climate Change Agreements** are voluntary agreements made between businesses and the Environment Agency to reduce emissions and improve energy efficiency in return for a discount on the Climate Change Levy (a tax added to electricity and fuel bills). The scheme runs to March 2027 with up to £300 million per year provided.

Innovation

- **Research & Development tax credits**
- **Capital allowances**
- **Full Expensing**

Business rates

- **Improvement relief**
- **Green technology relief**
- **Business rate reform** (under development)

Locational support

- **Freeports**
- **Investment Zones in England** (under development)

Public finance

Innovation funding

- The **Net Zero Innovation Portfolio Fund** aimed at accelerating the development of low-carbon technologies to a commercial stage has a series of competition grants for innovation, energy efficiency and fuel switching. It is worth £1 billion and ends in 2024.
- The **Industrial Energy Transformation Fund** which provides grant funding for feasibility and engineering studies, and for the deployment of industrial energy efficiency and deep decarbonisation projects.
- The **Industrial Decarbonisation Challenge Fund**, led by UKRI, supporting the first deployment projects for infrastructure for hydrogen and CCUS.
- The **Transforming Foundation Industries Challenge** aims to address barriers affecting the sector's decarbonisation by funding several different projects, including University technology transfer and Glass Future. It is worth £210 million and ends in 2024.
- The **Green Industries Growth Accelerator fund** to support the manufacturing supply chain in the CCUS (including GGRs) and hydrogen sectors.
- **Local Industrial Decarbonisation Plans**
- The government has committed £21.7 billion funding for CCUS and hydrogen.
- The **Made Smarter** programme provides support to SMEs for digital technology adoption.
- The government is introducing a **Clean Industry Bonus**, which includes financial support to reward building more sustainable factories and supply chains. The bonus will be available to offshore wind projects bidding for Allocation Round 7 Contracts for Difference.
- **Sustainable Industrial Futures** is funding delivered through UKRI focused on tackling challenges to enable the transition of UK industrial and manufacturing processes to net zero.

- The government has provided a £500 million contribution to the construction of the Electric Arc Furnace for the Tata Steel Port Talbot site. Discussions are ongoing regarding potential support for the British Steel site in Scunthorpe.

Access to electricity system

- The newly formed **National Wealth Fund** is the successor to the UK Infrastructure Bank and includes a strategic steer to align investment with the government's growth and clean energy missions.
- **British Business Bank**
- **UK Export Finance**
- **Green gilts**

Compliance and reporting

Carbon pricing

- The **UK Emissions Trading Scheme** (ETS) was introduced following the UK's exit from the European Union and EU Emissions Trading Scheme. Sectors in scope have a capped amount of greenhouse gas emissions every year, which declines over time in line with net zero. The next phase of the scheme is due to begin in 2027, with ongoing consultations on reform.
- **Carbon Price Support**
- The **Carbon Board Adjustment Mechanism** (CBAM) is due to be introduced by the government in 2027 to protect sectors in scope of the scheme from carbon leakage risk.

Regulation

- **Minimum Energy Efficiency Standards (MEES)**
- **Ecodesign for Energy-Related Products Regulations**
- **Energy Information Regulations**
- **Best available techniques (BAT)**
- **Compliance with other regulations** e.g. health and safety, environmental protection

Public procurement

- **National Procurement Policy Statement**
- **Government Buying Standards**

Reporting

- The **Energy Saving Opportunity Scheme** (ESOS). ESOS is a mandatory audit of the energy used by qualifying businesses buildings, industrial processes and transport and aims to support businesses to identify measures to save energy and achieve carbon and cost savings.
- **Combined Heat and Power Quality Assurance Programme**
- **Streamlined Energy and Carbon Reporting**
- **Taskforce on Climate-Related Financial Disclosures**
- The government has committed to consult on and introduce mandatory **Transition Plans**.

Knowledge sharing

- **Industrial clusters**
- **Local Enterprise Partnerships**
- **Knowledge Transfer Networks**
- **Catapult Centres**
- **Industrial Decarbonisation Research and Innovation Centre**
- **Transforming Foundation Industries Research and Innovation Hub**
- **Trade Associations**

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With thanks to a range of Aldersgate Group members for their valuable input, and to those external organisations who also offered a wider perspective.

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Published April 2025