

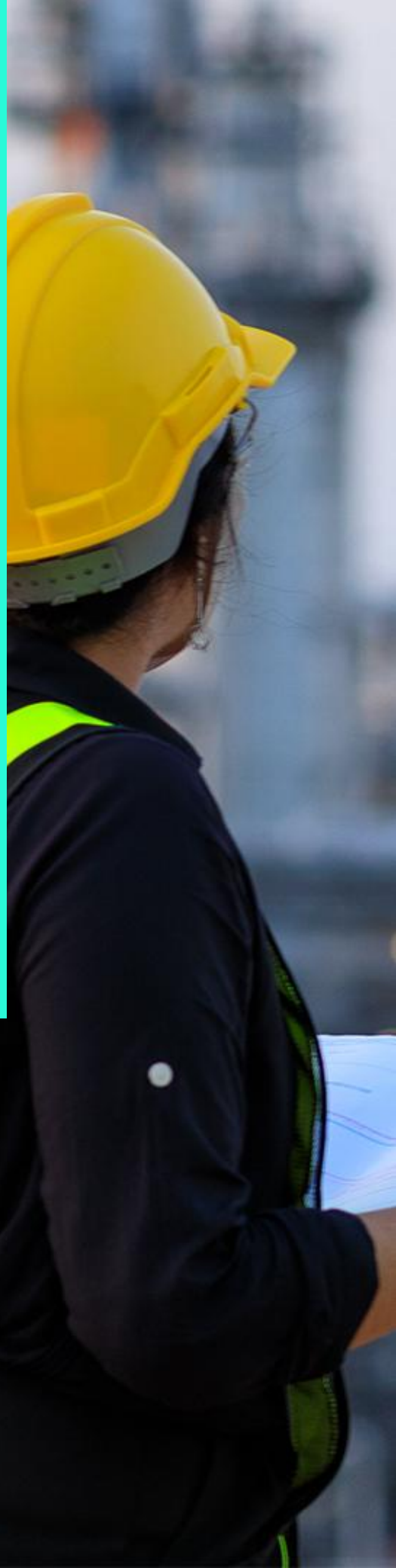


Next Steps for UK CCUS Deployment

Celebrating the successes of the UK CCUS sector, ensuring timely delivery of existing commitments and building the framework for Spending Review 2027

September 2026

Report prepared as part of the CCSA submission to the UK Government ahead of the 2026 Autumn Budget



Executive Summary

2026 has been a pivotal year for the UK's Carbon Capture, Usage and Storage (CCUS) sector. Following the first five Final Investment Decisions (FIDs), projects are now well into construction. Supported by the Government's 2025 Spending Review commitment, they are already delivering substantial returns through reindustrialisation, regional growth and supply-chain activity across the UK.

These first projects provide the foundation for the UK's CCUS sector. A substantial project pipeline is ready to deploy; necessary to support foundational industries, strengthen energy security and deliver critical carbon removals.

Thanks to Government support, the Liverpool Bay CCS network for HyNet across the Northwest and North Wales, and the Northern Endurance Partnership (NEP) serving the East Coast Cluster (ECC) in the Northeast, are now more than 33% complete. Three CO₂ capture projects are also under construction, including the UK's first cement plant, energy-from-waste facility and gas-fired power station equipped with CCUS. Alongside a growing pipeline of mature projects, these sites are catalysing private capital, supporting the reindustrialisation of the UK's industrial heartlands, and helping to deliver a sustainable transition for the North and Irish Seas.

Together, these projects have;

- **awarded more than £4 billion in supply chain contracts to c.350 companies and subcontractors**
- **exceeded their 50% UK content target**
- **supported approximately 5,500 jobs during construction**

To break down these impacts further:

- NEP is constructing the transport and storage network underpinning the ECC including the offshore pipeline from Teesside to the Endurance saline aquifer. Alongside this, NEP is progressing the Humber pipeline. The cluster, which includes the world's first utility-scale gas-fired power station with CCS, Net Zero Teesside (NZT), has awarded more than 300 individual subcontracts to UK businesses, totalling over £2.1 billion, including £500 million of new awards since Q1 2026. This has created and supported 1,800 jobs to date, with this figure expecting to rise to over 3,000 at peak construction.
- The Liverpool Bay CCS Transport and Storage (T&S) infrastructure is now well advanced, repurposing retired offshore oil and gas assets to create the backbone of the HyNet cluster's transport and storage network. HyNet has awarded over £2 billion in supply chain contracts, supported and created 2,000 construction jobs and will create 200-300 permanent positions over the 25 year operation. Two major capture projects have already begun construction to connect: the Padeswood CCS cement plant, supporting a crucial industrial site that first opened in 1949, and the Protos Waste Energy with Carbon Capture and Storage (WECCS) project, which is expected to support around 300 roles during construction and create 80 permanent skilled jobs once operational. The plant will process up to 500,000 tonnes per year of non-recycled waste while generating 49.9MW of low-carbon baseload electricity.
- Allocation of committed Development funding for Viking CCS, as part of last year's spending review is enabling the support of further engineering, design and commercial work on the project, [with UK supply chain contracts UK supply chain contracts amounting to over £14 million, supporting up to 60 roles across the lifetime of the contracts,] keeping it on the pathway to working towards financial close this Parliament, enabling skilled jobs and driving economic growth in the Humber, one of the UK's most industrialised regions.
- The Acorn Project continues to play a critical role in Scotland's industrial decarbonisation ambitions and the development of a broader Scottish CCUS cluster. Ongoing Government support is enabling Acorn to progress development activities and explore approaches to market maturation, commercial risk allocation, non-pipeline transport and storage-led development. Working with Government and industry stakeholders, the project is helping to identify lessons from first-wave CCUS projects that can support lower-cost delivery models, improve value for money, increase private sector participation and reduce long-term reliance on Government support across future phases of UK CCUS deployment.
- The launch of the ECC Teesside Selection Process, which will enable additional capture projects to connect to the NEP T&S network, including the Non-Pipeline Transport (NPT) Pathfinder, alongside ongoing bilateral discussions with projects on HyNet's Project Negotiation List, demonstrates a clear commitment to maximising the return on public investment. These initiatives are helping to fill the stores by accelerating project deployment, unlock private sector investment, and support the transition towards a competitive, sector-led CCUS market.

Building a CCUS sector that delivers across the UK

The UK's CCUS sector is critical to regional economic growth, safeguarding foundational industries and cementing the UK's position as a clean energy superpower. The sector already generates more than £1.2 billion in annual turnover and is projected to grow by nearly 10% per year, creating high-skilled jobs, attracting investment, and strengthening industrial competitiveness across the UK.¹

The CCSA, within their 2025 Delivery Plan, highlights the pipeline of industrial clusters who are working towards financial close this parliament or early in the 2030's. Delivering these projects will see benefits delivered across Scotland, Wales, the Humber, Derbyshire, Staffordshire, Somerset and East Anglia - spreading investment and opportunity to industrial communities throughout the country.

- **50,000 jobs and £5 billion in annual GVA** could be generated by a strong UK CCUS sector in the 2030s as the industry matures, according to DESNZ analysis².
- **More than 100 CO₂ capture projects**, with the potential to capture 77 MtCO₂ per year, are currently in development across the UK. If delivered, this puts the UK on course to meet the CCC's Seventh Carbon Budget advice of requiring 73 MtCO₂ of annual capture capacity by 2050.
- **Decarbonising the UK's foundational industries** depends on CCUS. For sectors such as cement, lime, chemicals and refining, CCUS is one of the only credible pathways to deep decarbonisation while retaining domestic production. It can safeguard strategic industries, unlock billions of pounds of private investment, support regional economic growth and strengthen UK competitiveness in low-carbon products. In cement alone, CCUS can help secure a £3.6 billion industry that underpins thousands of skilled jobs and supplies the materials needed for national infrastructure and housebuilding.
- **Almost 14 GW of CCUS-enabled low-carbon power** capacity is currently in development and could be deployed by 2035. These projects will provide the dispatchable low-carbon generation needed to complement renewables, maintain system reliability and meet growing electricity demand from sources such as data centres and electrified industry.
- **18.2 MtCO₂ per year of engineered Greenhouse Gas Removals (GGRs)** could be delivered by 2035 through projects already identified in the UK pipeline. This would help keep the UK on track to meet the CCC's recommended 35.8 MtCO₂ per year of removals by 2050. Global demand for carbon removals could create a \$1.2 trillion market by 2050, with the UK potentially capturing \$100 billion of value⁶. A well-functioning GGR market could also save taxpayers around £1 billion per year in the 2030s and more than £3 billion per year by 2050 by reducing the need for Government support⁷.
- **More than 100 MtCO₂ per year of storage capacity by the mid-2030s** could be delivered if current UK storage projects proceed. The UK has already granted four storage permits, has 22 further licences progressing, and an additional licensing round underway. By leveraging its unique geological resources and offshore expertise, the UK could establish a £30 billion per year CO₂ storage industry by 2050, generating more than £12 billion in annual GVA through domestic deployment and international CO₂ cross-border storage services.



1 WPI Economics, Economic benefits of industrial decarbonisation: A low carbon industrial future for the UK, 2023

2 UK Government, UK CCUS: How the government supports the development and deployment CCUS in the UK and internationally, 2025

3 CCSA Delivery Plan, 2025

4 CCSA Delivery Plan, 2025

4 CCSA Delivery Plan, 2025

6 McKinsey, Carbon removals: How to scale a new gigaton industry, 2023

7 CCSA, Position Paper, Capturing the Greenhouse Gas Removal Opportunity, 2026

Maintaining the Momentum: Summary of Recommendations

The UK's initial CCUS projects are successfully demonstrating that carbon capture, transport and storage can be delivered at commercial scale. However, these first-of-a-kind projects also provide important lessons for the future development of the sector. As Government has recognised, the capital intensity, long-term support requirements and balance sheet implications associated with early projects mean that future deployment cannot rely solely on the models developed for the first clusters. The next phase of sector development must therefore focus on market maturation, cost reduction, commercial innovation and the creation of new private revenue streams that progressively reduce reliance on taxpayer support while maintaining investment momentum and delivering value for money.

For this Autumn Budget, we emphasise the importance of the £9.4 billion already committed to the sector through the previous Spending Review, which is already delivering tangible economic, industrial and decarbonisation benefits across the UK. To sustain this momentum, strengthen investor and developer confidence, and maximise the value of existing Government commitments, we propose the following non-fiscal actions for consideration as part of both the Autumn Budget and the upcoming 2027 Spending Review

1. Progress the build-out of the Northern Endurance Partnership supported East Coast Cluster & the HyNet cluster to maximise their utilisation

- **Immediately** publish the outcome of the HyNet Project Negotiation List (PNL) Review to provide required clarity for projects as well as a timeline for projects to move from Standby to Priority lists.
- **Immediately** publish application numbers and aggregate capture capacity for the ECC expansion process to demonstrate investor interest as well as publication of DESNZ's CO₂ T&S availability analysis for HyNet.
- **By February 2027** complete the ECC Teesside Selection Process and NPT Pathfinder and publish PNL by February 2027.
- Accelerate negotiations with capture projects to reach FID by end of 2026 for HyNet and end of 2027 for ECC projects to maximise utilisation of existing T&S infrastructure.
- Progress CCS Network Code reforms to enable non-firm capacity products and maximise utilisation of existing transport and storage infrastructure

2. Provide a clear a long-term framework for deployment and market transition in the 2027 Spending Review for the next CCUS projects and clusters, allowing them to reach key investment decisions during this Parliament.

a) *Maintain momentum behind the delivery of CCUS infrastructure projects in receipt of public development expenditure support, including Viking CCS, the Acorn Project, Morecambe Net Zero | Peak, and the Northern Endurance Partnership Humber Expansion.*

- Continue development funding and support to enable these clusters to work towards FID.
- Work with the Acorn Project to support the release of funding allocated at SR25.
- Establish a bankable and fiscally sustainable framework for future T&S projects including concluding discussions on the future TRI model to address balance sheet concerns ahead of SR27.

b) *Provide a clear route to market for further clusters aiming to reach FID this parliament or early in the 2030s. This includes clusters such as Bacton Low-Carbon Energy Hub, Poseidon, Exolum 7CO₂, South Wales Industrial Cluster (SWIC), and Veri Energy.*

- Publish a clear timetable for future allocation rounds including transparent application and assessment processes.
- Provide visibility on the scale and scope of future deployment opportunities and future risk allocation between Government and industry.
- Create a pathway towards greater private financing and commercial responsibility.
- Publish a long-term deployment strategy covering capture volumes, storage capacity and geographic expansion.
- Clarify responsibilities across DESNZ, Ofgem, NSTA and other regulators.
- Provide visibility on future third-party access and network expansion arrangements including establishing a framework within the CCS Network Code for merchant access.

c) *Establish a cohesive framework for CCUS Delivery including supply chain & skills, permitting & planning and stronger cross-government co-ordination.*

- Coordinate workforce planning across CCUS and adjacent sectors.
- Support targeted training programmes and apprenticeships.
- Align CCUS with wider green jobs and industrial strategy initiatives.
- Strengthen UK supply chain capability and export readiness.

d) *Work with industry to capture & share lessons from the initial cluster process to reduce costs & accelerate future deployment.*

- Establish a formal process for capturing and disseminating lessons learned.
- Share learning on project delivery, financing, procurement & contracting, negotiations and construction.
- Identify and address future supply chain constraints.
- Review planning and permitting experience from first-wave projects including regulator & planning authority resourcing.
- Consider how risk allocation and insurance markets can evolve.
- Maintain flexibility within future CCUS business models.

Maintaining the Momentum: Summary of Recommendations

3. **Expand access to CCUS by enabling industries across the UK to utilise alternative CO₂ transport solutions, including shipping, road and rail, ensuring more dispersed industrial sites can connect to CO₂ storage infrastructure.**
 - Recognise NPT as nationally significant CCUS infrastructure.
 - Provide policy parity with pipeline-connected projects.
 - Publish a clear framework covering NPT eligibility, contracting routes and timelines.
 - Conclude the NPT framework and Pathfinder shortlist ahead of SR27.
 - Create a clear route to commercial contracts and support market-led NPT infrastructure through enabling investment.
 - Consider targeted mechanisms for systemic cross-chain risks.
 - Ensure NPT supports SAF, low-carbon fuels and GGR projects.
 - Develop frameworks supporting future cross-border CO₂ transport and storage.
4. **Deliver the policies and regulatory frameworks needed to support a self-sustaining CCUS market, including cross-border CO₂ transport and storage with Europe, low-carbon product markets and greenhouse gas removal markets.**
 - a) *Agree to EU UK ETS alignment as part of upcoming EU UK Summit, with new date confirmed as soon as possible, along with delivery of a comprehensive CBAM.*
 - Agree UK-EU ETS linkage at the next UK-EU summit.
 - Publish a clear implementation pathway and timetable.
 - Deliver a comprehensive UK CBAM.
 - Expand CBAM coverage where appropriate, including sectors exposed to carbon leakage.
 - Pursue dynamic alignment with the EU CBAM where beneficial.
 - b) *Secure additional London Protocol MOU agreements with Member States to unlock cross-border CO₂ storage markets.*
 - Prioritise MOU agreements with European countries including EU and EEA member states.
 - Clarify domestic licensing arrangements for cross-border storage.
 - Ensure regulatory readiness for international CO₂ flows.
 - Resolve customs, accounting and regulatory barriers to cross-border storage.
 - Provide confidence that existing storage licences can continue progressing.
 - Treat cross-border storage as a strategic export industry.
 - c) *Create demand for low-carbon products through standards and green public procurement.*
 - Use public procurement to create demand for low-carbon products.
 - Develop standards and carbon accounting methodologies for CCU products.
 - Introduce low-carbon product standards and carbon labelling.
 - Support domestic production of strategic low-carbon materials.
 - Strengthen market signals for CCUS-enabled SAF.
 - d) *Stimulate early reliable demand for high-quality, durable Greenhouse Gas Removal (GGR) credits through targeted policy incentives such as sectoral mandates and clear green claims guidance*
 - Stimulate early demand for durable removal credits including exploring a UK buyers' club and Article 6 opportunities.
 - Consider sectoral mandates, including aviation and data centres.
 - Ensure GGR business models are investable and bankable including finalising Power BECCS and NPT business models.
 - Enable eligible WECCS projects to access GGR markets.
 - Legislate for UK ETS integration of GGRs by 2029.
 - Develop proportionate, innovation-friendly GGR standards.
 - e) *Use the National Wealth Fund, Great British Energy and alternative finance to accelerate CCUS deployment, helping to derisk projects and supply chains.*
 - Review NWF investment thresholds and eligibility criteria.
 - Support blended finance models to crowd in private capital.
 - Clarify the role of Great British Energy in CCUS-related investments.
 - Utilise regional growth funds and public finance institutions.
 - Support development of private insurance markets for CCUS risks.
 - Maintain a stable and predictable investment environment, including timely clarity on the post-Energy Profits Levy framework.
 - f) *Create a long-term market framework for CCS-Enabled Power*
 - Ensure market arrangements reward flexibility, reliability, carbon performance and recognise the value of dispatchable low-carbon generation
 - Reform electricity markets to support more market-based revenues including carbon pricing.
 - Support timely grid connections for CCS-enabled power projects.
 - Position CCS-enabled generation to support growing demand from data centres and new industrial loads.

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Timeline: Twelve Months of Delivering the UK's CCUS Ambition

The timeline below highlights some key developments over the past twelve months, demonstrating the progress achieved and the importance of maintaining momentum.

September 2025

- **Government Delivery:** The first HyNet PNL priority projects Heidelberg Materials' Padeswood CCS cement works, and Encyclis' Protos Energy Recovery Facility (ERF) reached FID with government.

November

- **Policy development:** Ofgem directed the first modification of the CCS Network Code, *Modification CCS001*, to be implemented. The change will allow Users to vent and will prevent non-compliant CO₂ entering the T&S Network.

January 2026

- **Project Delivery:** The National Wealth Fund (NWF) supported Peak Cluster launched its phase 1 consultation. Following high public interest, Peak undertook additional engagement with Wirral communities, to support understanding about the proposals for the project in the area.

February

- **Policy Development:** ECC Teesside selection process launched, aiming to allocate the remaining capacity at the Endurance CO₂ storage site, while securing value for money for bill payers and taxpayers.
- **Market Development:** NWF's five-year plan lists CCUS and hydrogen as two of its priority investment sectors. The fund aims to commit its remaining £19.4bn capital by 2030/31.

April

- **Policy Development:** Government launched the ECC Non-Pipeline Transport (NPT) Pathfinder Selection Process, paving the way for transportation of CO₂ via truck, rail, ship or barge, which will facilitate the deployment of CCUS in areas where a pipeline is technically or economically unviable.
- **Community Investment:** Evero Energy launched a Community Investment Fund to support local initiatives in areas near the HyNet development. The fund is intended to support wildlife or biodiversity projects, public spaces, local community equipment and local interest projects.
- **Project Delivery:** The multi-million-pound upgrade of Redcar Bulk Terminal's (RBT) deep-water quay is completed – critical enabling infrastructure for the construction of NEP and NZT, delivering a major boost to local employment and the regional supply chain.

October

- **Project Delivery:** First appraisal wells drilled on North Sea Transition Authority (NSTA)'s first round carbon storage licence for ENI's Bacton Low-Carbon Energy Hub. The Eni-led Bacton project aims to decarbonise power and industrial processes in eastern England and aims to store at least 10Mt CO₂ per annum.

December

- **Investment & Supply Chain:** Marked one year since the NEP became the first UK carbon transport and storage company to reach financial close. In that year, £1 billion of UK subcontracts had been awarded through competitive tenders and £1 million was invested in local skills, with 175 young people provided training to access clean energy careers.
- **Investment & Supply Chain:** HyNet agreed Engineering Procurement and Construction Management (EPCM) contract with Mitsubishi Heavy Industries (MH) and Worley.
- **Government Delivery:** NEP is awarded a £98.8 million development funding by Ofgem to progress development activities for the Humber Carbon Capture Pipeline at pace.

March

- **Government Delivery:** The NSTA officially closed applications for its second offshore carbon storage licensing round. The round offered 14 locations across Scottish and English waters including depleted hydrocarbon fields and saline aquifers.

May

- **Project Delivery:** Engineering, Procurement and Construction (EPC) contractor Kanadevia Inova completed the initial enabling works at Protos CCS, leading the way for construction to start in earnest.
- **Project Delivery:** Evero submitted its planning application for the Ince Bioenergy with Carbon Capture and Storage (InBECCS) project, a landmark development within the HyNet cluster. InBECCS is expected to capture up to 250,000 tonnes of CO₂ annually, permanently removing these emissions from the atmosphere while contributing to homegrown baseload energy.

Timeline: Twelve Months of Delivering on the UK's CCUS Ambition

The timeline below highlights some key developments over the past twelve months, demonstrating the progress achieved and the importance of maintaining momentum.

June

- **Project Delivery:** The Peak Cluster entered the 'Assess Phase' of its carbon storage licence, a crucial step towards preparing a permit application to safely lock away CO₂ emissions in the depleted North and South Morecambe fields in the East Irish Sea, once gas production ceases by the end of the decade.

August

- **Investment & Supply Chain:** Uniper appointed Worley as EPC partner for its Connah's Quay Low Carbon Power Project. The proposed new power station would connect into nearby CO₂ transport and storage infrastructure as part of the HyNet cluster and has a potential capacity of up to 1.38GW of low-carbon power production.

September

- **Project Delivery:** NEP commenced the offshore installation campaign for its 136km CO₂ pipeline to the Endurance storage site, marking a major construction milestone for the East Coast Cluster. NEP deployed advanced seabed monitoring technology and will use almost 3,000 tonnes of marine biofuel during offshore construction activities, supporting responsible delivery of UK CCUS infrastructure.

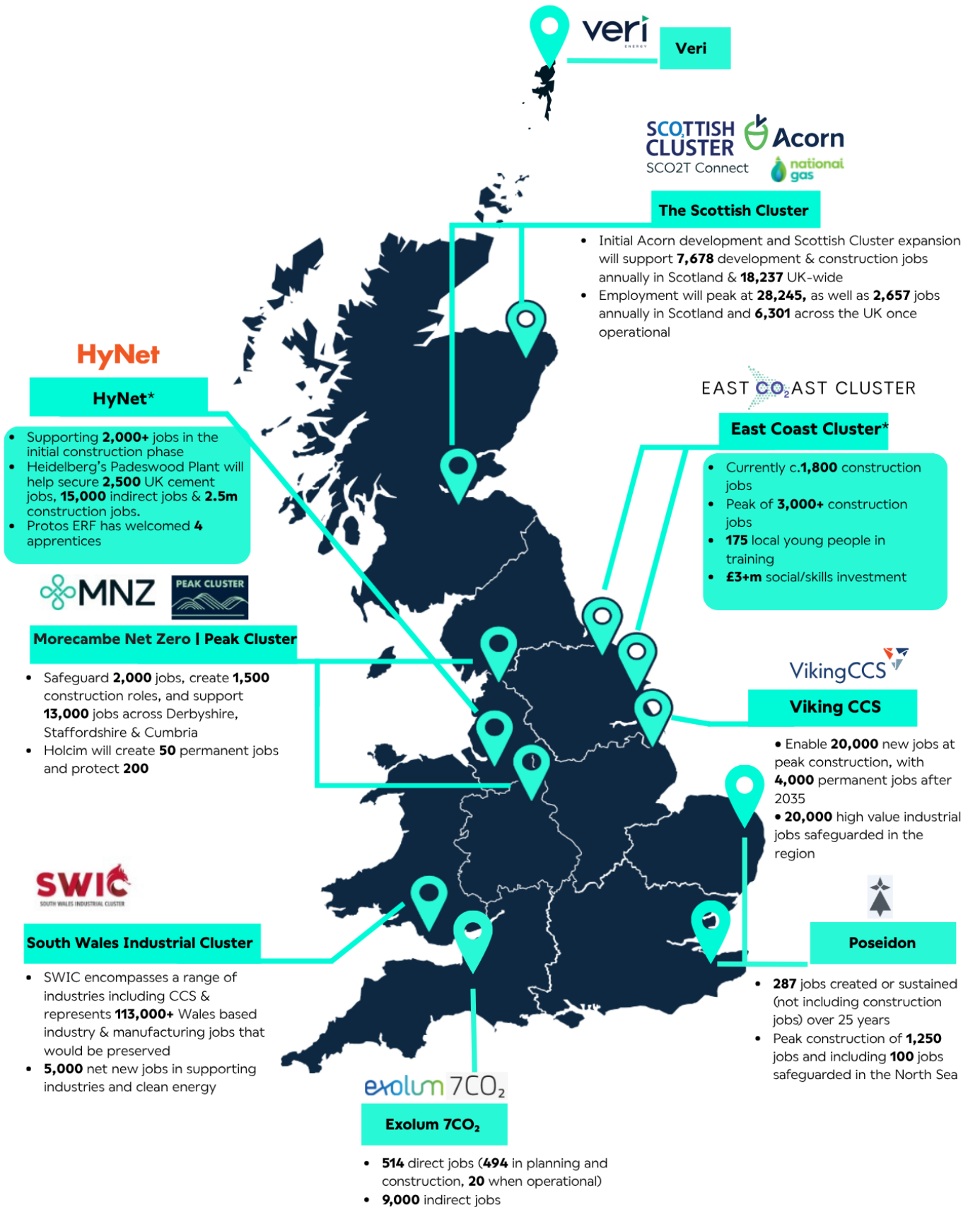
July

- **Project Delivery:** Offshore construction began at NEP with the arrival of the first linepipe joints at the Port of Hartlepool. This marked the start of construction of a 149km offshore pipeline. More than 60% of the pipe sections have been manufactured in Hartlepool, supporting around 150 skilled jobs and creating 35 additional roles, including apprenticeships.
- **Project Delivery:** Also at NEP, the project drilled its first exploration well in the Southern North Sea at a prospective storage site. Initial analysis indicated the site has suitable properties to safely and securely store CO₂.
- **Project Delivery:** Groundwork progressed at Evero's Padeswood site that is being constructed using evoZero near-zero carbon cement produced at its Brevik CCS plant in Norway. An average of 80 construction workers are on site each day, which is expected to double by the end of the year.
- **Government Delivery:** Government approved a £65.5 million development funding package for the Viking CCS project and £7.3 million in development funding for the Acorn project.





Alongside the five projects that have reached final investment decisions in 2024 and 2025, there are a large number of additional clusters and projects in the pipeline looking to deploy over the coming decade, with considerable associated job opportunities.



*Cluster / projects in construction

**Please note: We do not include all the CCUS clusters that are currently in development in the UK. Also, the jobs numbers are represented as reported to the CCSA by individual project. so are subject to different accounting methodologies and assumptions. As such, number should not be compared and aggregated.

Economic Progress Since SR25: From Commitment to Delivery

The Spending Review 2025 commitment of up to £9.4 billion for UK CCUS deployment has begun to translate into tangible economic activity across the country.

Government Support Mobilising private investment

Government backing for first-of-a-kind CCUS projects has unlocked private sector investment by reducing early delivery risk and giving industrial partners, investors, contractors and supply-chain companies confidence to commit capital. Investment is now flowing into engineering, manufacturing, construction, logistics and specialist professional services across the UK, supporting both existing industrial clusters and emerging clean energy supply chains.

As projects progress from planning into construction and operation, each pound of public funding is helping to leverage additional private investment, strengthening regional economies and building strategic industrial capability that can support future deployment across the UK and internationally.

Growing UK supply chains and jobs

The impact is already substantial. CCUS Projects that have reached FID and are under construction have to date:

- **Awarded more than £4 billion in supply-chain contracts**
- **Engaged over 350 companies and subcontractors**
- **Exceeded their 50% UK-content target**
- **Supported approximately 5,500 construction jobs**

These contracts are benefiting businesses across the UK, from major manufacturers and fabrication yards to specialist SMEs, while sustaining high-value industrial skills. CCUS deployment is creating demand for expertise in engineering, construction, offshore operations and advanced manufacturing, helping retain industrial capability and build new export opportunities.

With around 80% of the CCUS value chain addressable by the UK's existing energy and industrial supply chain⁸, continued deployment can keep investment, jobs and economic value in the UK while strengthening regional economies and building an export-ready industrial base.

The annual UK CCUS market was valued at £1.6bn in 2025 and is predicted to grow to £8.8bn by 2030, representing a compound annual growth rate of 40.1%⁹, with the wider opportunity for UK manufacturers and supply-chain companies estimated to be worth up to £100bn¹⁰. With much of the supply chain already in place, the UK is well positioned to capture a significant share of this economic value.

Driving regional growth and reindustrialisation

CCUS is emerging as one of the UK's most significant regional growth opportunities and to retain and grow sectors that are fundamental to the UK economy. Projects are concentrated in industrial heartlands where they can protect existing employment, attract new investment and support wider regeneration objectives.

Rather than requiring industry to relocate or contract, CCUS allows industrial communities to remain competitive whilst transitioning to a low-carbon economy. This combination of industrial decarbonisation, infrastructure investment and job creation is supporting a broader programme of reindustrialisation, creating high-quality employment opportunities and strengthening economic resilience across UK regions

Creating a Clean Energy Superpower

CCUS will play an essential role in delivering the Government's ambition to become a clean energy superpower. Alongside renewable generation, nuclear energy and network investment, CCUS provides a critical source of firm and dispatchable low-carbon power capable of supporting a modern and resilient electricity system.

As the power sector continues to decarbonise, CCS-enabled generation can provide reliable electricity when renewable output is low, helping maintain system stability while reducing dependence on imported fossil fuels. This capability will become increasingly important as electricity demand grows and as more sectors of the economy electrify. The Committee on Climate Change (CCC)'s Carbon Budget 7 outlines a need for up to 8 GW of low-carbon dispatchable power by 2035.

Importantly, utilising low-carbon dispatchable power is recognised as a cost-effective route for achieving a decarbonised power system. In its analysis of pathways to a clean power system by 2030, NESO highlights that deploying significant volumes of low-carbon dispatchable generation can reduce overall system costs. This is achieved through lower curtailment and export costs, alongside a greater ability to align generation with demand.

Reliable low-carbon power is also becoming a strategic economic asset. The expansion of data centres, digital infrastructure and emerging AI technologies will significantly increase electricity demand over the coming decade. A secure supply of dispatchable low-carbon generation can support these investments, helping ensure the UK remains an attractive location for energy-intensive industries and next-generation technology businesses.

Protecting foundational industries

CCUS is not only a decarbonisation technology, but a strategic tool for maintaining domestic production of the materials, fuels and industrial products that underpin the UK's economy and national resilience.

Many of the industries that underpin the UK economy face growing pressure from international competition, rising energy costs and the challenge of decarbonisation. Cement, chemicals, refining, glass, steel and other energy-intensive sectors provide essential products, support highly skilled employment and anchor regional economies across the country.

⁸ Rystad Energy Report, 2024

⁹ Markets and Markets, UK CCUS Market 2025-2030, 2026

¹⁰ Rystad Energy & OEUUK, UK oil and gas supply chain and opportunities in the energy transition, 2024 and The UK Offshore Energies Association, CCUS Supply Chain Report

Economic Progress Since SR25: From Commitment to Delivery

For many of these industries, CCUS represents the most credible pathway to deep decarbonisation. Without access to carbon capture and CO₂ transport and storage infrastructure, there is a significant risk that investment and production could move elsewhere, undermining both industrial competitiveness and national economic resilience.

In particular:

- Cement and minerals are foundational to the UK economy, generating £8bn GVA annually and supporting 80,000 jobs¹¹. CCUS can secure the future of these industries while unlocking new growth. Maintaining a domestic supply of low carbon cement will be essential if the UK is to meet its infrastructure and house building ambitions. The Morecambe Net Zero-Peak Cluster alone could create and safeguard 13,000 jobs, attract £5bn of investment and generate £1.8bn in GVA by 2050, supporting industrial communities across the Peak District and Cumbria¹².
- Refineries will play a critical role in producing lower-carbon fuels and other products needed for the energy transition. CCUS is essential to maintaining a competitive domestic refining sector while decarbonising transport and industry.
- Hydrogen deployment depends on CCUS, with at least 4GW of the UK's 10GW hydrogen production ambition expected to come from CCUS-enabled hydrogen. The sector could support 30,000 direct jobs and contribute more than £7bn in annual GVA by 2030 and CCUS-enabled hydrogen can deliver the scale needed by industries faster and at a lower price than electrolytic hydrogen¹³.
- Sustainable Aviation Fuel (SAF), critical to aviation decarbonisation, is projected to grow at a Compound Annual Growth Rate (CAGR) of 26.2% between 2022 levels to 2050¹⁴.

CCUS can enable the UK to become a low carbon product superpower by enabling the development of emerging low carbon sectors and supporting foundational industries to produce these products. This will unlock significant economic benefit and export opportunities for the UK economy.

Exporting UK CCUS expertise and storage services

The UK is well positioned to become a global leader in carbon management. Over the past decade, Government and industry have developed expertise in policy design, project development, transport and storage systems, carbon capture technologies and commercial models that are increasingly attracting interest internationally.

Demand for carbon management solutions is growing across Europe and beyond as countries seek practical pathways to decarbonise heavy industry, deliver carbon removals and reach long-term climate objectives. This creates opportunities for UK companies to export expertise, technologies and specialist services developed through domestic deployment.

The UK's offshore storage resources represent a particularly significant opportunity. With a third of potential CO₂ storage

capacities in Europe located in UK waters, the UK can support both domestic decarbonisation and the wider development of European carbon management markets. As neighbouring countries scale up carbon capture deployment, demand for secure storage services is expected to grow substantially.

Analysis commissioned by the CCSA and undertaken by Xodus for HM Treasury indicates that economically licensed stores able to export capacity could generate £4 billion a year in CO₂ export revenues and attract £7 billion in capital investment by 2040. The additional revenues could also reduce Government exposure under Revenue Support Agreements by 40%¹⁵.

Global CCUS markets are forecast to reach £181bn annually for industrial systems and £54bn for CO₂ transport and storage¹⁶. Maintaining and funding a clear delivery pipeline and deployment trajectory in the UK will give the supply chain the confidence to invest, enabling the UK to secure a leading share of these export opportunities.

Next Steps

The progress achieved over the last twelve months demonstrates that the UK CCUS sector has moved from policy design to project delivery. At the same time, emerging lessons from project development underline the importance of evolving the sector beyond a purely government-supported delivery model. Fiscal constraints, affordability considerations and the need to manage public sector balance sheet exposure mean that future growth will increasingly depend on attracting private capital, developing merchant market opportunities and creating durable sources of demand for carbon management services.

The experience of the first CCUS projects demonstrates both the potential and the challenge facing the sector. Government-supported projects are progressing broadly in line with expectations and beginning to deliver the infrastructure, supply-chain capability and investment needed to establish a UK carbon management industry. At the same time, uncertainty over future market frameworks, infrastructure access and commercial models is creating a widening gap between projects within the current programme and those seeking to form the next wave of deployment. Addressing this challenge does not primarily require new spending commitments. Rather, it requires the policy clarity, regulatory certainty and market development measures that will allow private investment to continue flowing into UK CCUS opportunities while improving affordability and reducing reliance on long-term public support.

The following recommendations set out in this submission are therefore focused on the non-fiscal policy, regulatory and market reforms required to support that transition.

¹¹ Mineral Products Industry (MPA), Profile of UK Mineral Products Industry, 2023

¹² MNZ & Peak Cluster, Putting the UK's cement and lime industry on the path to net zero: The MNZ-Peak Cluster Vision, 2025

¹³ UK, Economic Impact Assessment for the Hydrogen Sector, 2024

¹⁴ Transparency Market Research, Sustainable Aviation Fuel Market, 2022

¹⁵ CCSA & Xodus, The Economic Value to the UK of Providing Carbon Dioxide Storage Services to EU Emitters, Report provided direct to Treasury, 2025. Available on request.

¹⁶ Vivid Economics, Energy Innovation Needs Assessment – CCUS, 2019

Part A: Maximising existing clusters

1. Progress the build-out of the Northern Endurance Partnership supported East Coast Cluster & the HyNet cluster to maximise their utilisation

The launch and progression of both the NEP / ECC and HyNet expansion processes has been an important step in the advancement of the UK's CCUS sector. Having committed significant public and private capital to first-of-a-kind transport and storage infrastructure, the priority is now to maximise the economic, industrial and environmental value delivered by these strategic assets.

The UK's initial CCUS networks were designed to support both first-wave and future capture projects. Enabling additional users to connect on viable terms will maximise infrastructure utilisation and improve value for money.

The HyNet Project Negotiation List, published in 2025, identified five priority and five standby projects. A 2026 review to assess project progress and viability is understood to be largely complete before summer 2026, but the outcome has not yet been published. This delay is creating uncertainty for projects, which continue to incur costs maintaining contractors, teams and development activity while awaiting clarity from Government. Prolonged uncertainty slows the ability for priority projects to reach FID and standby projects to make progress, potentially increasing project costs and damaging investor confidence.

As the review concerns the implementation of an existing commitment rather than a new spending decision, the Government should publish the outcome as soon as possible and ahead of the Autumn Budget to provide certainty and maintain momentum towards FID.

The current absence of a defined route or timetable for progression from the Standby List to the Priority Negotiation List is creating significant uncertainty for project developers. Many projects are being forced to substantially slow or pause development activity while awaiting further clarity, resulting in the loss of momentum, supply chain disengagement and increased financing costs. This uncertainty risks increasing eventual costs to consumers and taxpayers, as projects may need to remobilise teams, refresh engineering studies, update planning and permitting work, and re-engage supply chain contracts. A clear timeline, accompanied by transparent criteria and anticipated review points, would enable developers to plan efficiently, preserve project value and maintain investor confidence while ensuring a robust pipeline of future projects is available as transport and storage capacity expands.

Alongside the publication of the PNL Review outcomes, DESNZ should publish its completed assessment of CO₂ transport and storage availability for the HyNet cluster. The analysis was completed earlier this year and stakeholders were initially advised in writing that the findings would be made public. Publication would provide valuable transparency regarding network capacity, sequencing assumptions and future connection opportunities, enabling projects, investors and supply chain partners to make informed decisions. Given the central role that transport and storage availability plays in project progression and investment planning, timely publication would improve market confidence and support more efficient deployment across the cluster.

Similarly, the launch of the ECC Teesside Selection Process has been a welcome step forward, creating a route for additional capture projects to connect to NEP and maximise use of the Endurance store. The accompanying Non-Pipeline Transport (NPT) Pathfinder has also helped to start broadened access to UK CCUS infrastructure by enabling dispersed carbon removal projects to also be considered, to transport CO₂ by ship, rail or road. To maintain momentum and investor confidence, both selection processes must remain on schedule, with results published by February 2027 at the latest.

In the interim, Government should publish the number of applications received and their combined capture capacity. This would demonstrate the strength of demand for access to existing stores and provide clear evidence of the wider investment and project development already being catalysed by the clusters.

The CCS Network Code will also play an increasingly important role in maximising the value of existing transport and storage infrastructure. As clusters move from first-wave deployment towards expansion, Government, Ofgem and industry should work together to introduce appropriate non-firm capacity products within the Network Code. Such arrangements would allow network operators to make use of operational flexibility and spare capacity that may emerge across connected projects, increasing network utilisation and improving value for money from existing public and private investment. Enabling more flexible access arrangements would support the connection of additional capture projects, help maximise utilisation of strategic storage assets, and reinforce the transition towards a more mature and efficiently operated CCUS market.

Successful expansion of HyNet and the NEP / ECC will show how initial public investment can support a wider, more commercially sustainable carbon management ecosystem.

“HyNet presents North West England and North Wales with a fantastic opportunity. We have big ambitions to hit net zero from 2038. To do this we need the Government to support HyNet, levelling up from North to South, East to West.” **Andy Burnham, then Mayor of Greater Manchester, April 2026**

Part B: Developing a predictable framework for deployment and market transition

2. Provide a clear a long-term framework for deployment and market transition in the 2027 Spending Review for the next CCUS projects and clusters, allowing them to reach key investment decisions during this Parliament.

2a. Maintain momentum behind the delivery of CCUS infrastructure projects in receipt of public development expenditure support, including Viking CCS, the Acorn Project, Morecambe Net Zero | Peak, and the Northern Endurance Partnership Humber Expansion.

The Government's commitment of up to £9.4 billion for CCUS deployment provides a strong foundation for sector growth. The Acorn Project and Viking CCS are strategically important infrastructure projects for Scotland, the Humber and the wider UK economy. Alongside supporting decarbonisation, they can unlock investment, strengthen industrial clusters, create high-value jobs and provide infrastructure for future industrial, power and carbon removal projects.

The July '26 approval of development funding for Viking CCS, originally committed through the 2025 Spending Review, is supporting further engineering, design and commercial work and keeping the project on a pathway towards financial close this Parliament. This momentum must be maintained so Viking is well positioned to reach FID following the 2027 Spending Review. Government should also announce anchor capture projects for Viking, providing the demand certainty needed to underpin the transport and storage network and unlock wider cluster investment.

Similarly, development expenditure support is enabling the Acorn Project to continue progressing towards as the sale of Storegga's stake in the project is completed. Acorn remains strategically important to Scotland's industrial decarbonisation and the development of a wider Scottish CCUS cluster. Through significant development support provided by both the UK and Scottish Governments, Acorn is helping to explore approaches to market maturation, commercial risk allocation, non-pipeline transport, storage-led development and future market-based frameworks. Lessons generated through this work can inform the wider evolution of the UK CCUS sector, helping Government identify pathways towards lower-cost delivery models, increased private sector participation and reduced levels of long-term public support.

The Peak | Morecambe Net Zero (MNZ) Cluster is a major CCS project that will decarbonise around 40% of UK cement and lime production by connecting industrial sites in Derbyshire and Staffordshire to the MNZ storage site in the East Irish Sea. The project is referenced in the Government's Carbon Budget Delivery and Growth Plan and the Climate Change Committee's Seventh Carbon Budget advice, which highlights the critical role of industrial carbon capture and storage in decarbonising foundational industries where emissions cannot be eliminated through electrification alone.

Cement and lime production account for a significant proportion of the UK's industrial process emissions, making projects such as Peak essential to achieving future carbon budgets while maintaining domestic production of strategic materials. The project has also attracted support from the National Wealth Fund (NWF), reflecting its strategic importance for regional growth, industrial competitiveness and the UK's long-term carbon management infrastructure.

The NEP Humber Carbon Capture Pipeline represents the next phase of development for the East Coast Cluster, extending the benefits already being delivered through Teesside to industrial emitters across the Humber. As a designated future build-out option within NEP's Phase 1 TRI licence, Humber Expansion is progressing the Humber Carbon Capture Pipeline alongside appraisal of additional offshore storage capacity, helping to maximise utilisation of existing transport and storage infrastructure and supporting future industrial, power and carbon removal projects. Government and regulatory support have already enabled substantial progress, including Ofgem's award of a £98.8 million development funding in December 2025 to continue development of the Humber Carbon Capture Pipeline at pace. Looking ahead, maintaining milestone-based development funding will be critical to allowing NEP to meet its licence obligations, continue de-risking the project and preserve a credible pathway to FID during this Parliament.

Delivery of these projects also requires clarity on the future structure of the Transport and Storage Regulatory Investment (TRI) model. Discussions with DESNZ are well underway, and the sector recognises the Government's objective of reducing on balance-sheet impacts and overall costs. These discussions should conclude ahead of the 2027 Spending Review, with a bankable model in place to enable future transport and storage projects to progress.

Part B: Developing a predictable framework for deployment and market transition

2b. Provide a clear route to market for further clusters aiming to reach FID this parliament or early in the 2030s. This includes clusters such as Bacton Low-Carbon Energy Hub, Poseidon, Exolum 7CO₂, South Wales Industrial Cluster (SWIC) and Veri Energy.

To realise the full regional and economic benefits of a successful CCUS sector, momentum must be maintained beyond the 2027 Spending Review to enable the deployment of additional clusters and transport and storage networks. Alongside the first projects that have reached FID and those that have received development funding, further clusters are progressing at pace and are in a position to reach FID during this Parliament or in the early 2030s.

The 2027 Spending Review should provide these projects with clarity on their route to market, whether through direct contract allocation, competitive processes, third-party access or other mechanisms.

Providing long-term investment certainty is essential to unlocking private capital and reducing the cost of capital for future projects.

Early visibility of the commercial framework will enable developers, investors and supply chains to make informed investment decisions, maintain committed Devex and continue progressing towards FID. This certainty is essential if the UK is to build on the success of the first wave of projects and establish a nationwide CCUS network capable of supporting industrial decarbonisation, carbon removals and future cross-border CO₂ storage markets.

These clusters include:

- **ECC Humber Carbon Capture Pipeline:** The 88km expansion of the ECC, connecting Humber industrial emitters to the NEP's offshore CO₂ storage network. It will enable additional industrial, power and carbon removal projects to access carbon storage infrastructure as the cluster grows.
- **Bacton Low-Carbon Energy Hub:** A strategic energy hub centred on Eni CCUS Holding's Bacton CCS project, which leverages the Bacton Gas Terminal in Norfolk and unlocks low-carbon hydrogen production. The Bacton CCS project and wider Bacton Low-Carbon Energy Hub would allow industrial decarbonisation at scale, by repurposing existing energy infrastructure where appropriate and enabling CO₂ transport and storage, alongside hydrogen production, transport and storage. This development would support the decarbonisation of industry and dispatchable power across East Anglia and the wider UK, while establishing Bacton as a major East Coast carbon management and hydrogen hub, with the potential for cross-border connections to EU CO₂ and hydrogen markets.
- **Poseidon Project (Perenco):** A large-scale offshore CO₂ storage project in the Southern North Sea that will repurpose existing gas infrastructure and depleted reservoirs for permanent storage. The project has already completed the UK's first offshore CO₂ injection test in 2025.

- **Exolum 7CO₂:** A multi-modal CO₂ terminal at Avonmouth, Bristol, designed to receive CO₂ by pipeline, rail and ship. The project would aggregate emissions from dispersed South West emitters and connect them to UK storage sites via non-pipeline transport.
- **South Wales Industrial Cluster (SWIC):** brings together industry, energy companies, infrastructure providers, academia and the public sector to decarbonise South Wales while supporting industrial growth. The region is home to major strategic assets, including the UK's largest steelworks, an oil refinery, one of Europe's largest gas-fired power stations, two LNG terminals supplying over 20% of UK gas demand, and one of only four nickel refineries in Europe. Through CCUS, hydrogen, electrification and low-carbon energy, SWIC aims to help industry reach net zero by 2040, safeguard around 113,000 jobs and unlock up to £30 billion of investment across Wales.
- **Veri Energy:** An integrated carbon management hub at the Sullom Voe Terminal in Shetland that would repurpose existing oil and gas infrastructure for CO₂ transport and storage, alongside renewable power and e-fuels production. Its strategic location could support both UK and future European carbon management markets

It is recognised that future support arrangements are likely to evolve beyond those used for Track-1 projects. The next phase of deployment should provide investors, developers and industrial emitters with a clear route from project development to commercial operation, including access to transport and storage infrastructure. This includes clarity on the evolution of the Transport and Storage Regulatory Investment (TRI) model, which industry recognises needs to evolve in part to address balance sheet issues, however, it is vital to ensure it remains both investable and fiscally sustainable.

Building on the success of Track-1, Government should establish a clear allocation framework with transparent eligibility criteria, assessment processes and future allocation rounds. Greater certainty around allocation processes, economic licensing, the scope and scale of future deployment opportunities and the route to market for storage operators will support investment decisions and maintain momentum.

A predictable UK-wide strategy for CCS deployment extending beyond current cluster commitments combined with clear ambitions for future capture volumes, storage capacity and geographic expansion will provide greater confidence that projects can continue development without recurring policy uncertainty.

Part B: Developing a predictable framework for deployment and market transition

Across sectors including cement, lime, chemicals, refining, energy from waste, hydrogen production, sustainable aviation fuel and low-carbon power generation, project developers are continuing to invest significant development capital despite limited visibility over future allocation processes and connection opportunities. This uncertainty creates challenges for investment decisions, supply-chain commitments and long-term business planning, particularly for projects that are expected to play a critical role in safeguarding industrial competitiveness and delivering the Government's Industrial Strategy objectives.

As networks expand, the framework should increasingly enable more commercial business models, encouraging competition, innovation and lower costs to taxpayers. Industry also welcomes the development of the Transition Access Agreement (TAA), which could widen access to existing infrastructure, increase network utilisation and support projects requiring lower levels of government support. Greater clarity is needed however on how existing business models will evolve over time, including transparency on the balance of risk between government and industry and how they may develop as the sector matures.

Without this visibility, projects outside the current programme face increasing uncertainty over their route to market, potentially delaying investment decisions and reducing the pipeline of projects. A transparent expansion and third-party access framework would help maximise utilisation of public and private investment already committed to CCUS infrastructure while

supporting the transition to a more competitive and market-led sector.

As the sector matures, access to transport and storage infrastructure should increasingly be available through both Government-supported allocation processes and commercial market mechanisms. While current deployment is rightly centred on projects supported through Government frameworks, a long-term objective should be to enable merchant projects to connect to transport and storage networks where they can demonstrate a viable commercial proposition. Delivering this transition will require further development of the CCS Network Code, including arrangements for third-party access, unbundled and merchant connections, capacity allocation and appropriate charging methodologies. Greater clarity on the framework for merchant access would provide investors and developers with confidence that projects can progress outside future allocation rounds, helping to maximise utilisation of existing infrastructure, unlock additional private investment and support the evolution towards a more competitive and market-led CCUS sector.

A gradual transition from a government-led deployment programme to a more competitive market framework will be essential to sustaining investment and unlocking the full economic and decarbonisation benefits of CCUS.



Part B: Developing a predictable framework for deployment and market transition

2c. Establish a cohesive framework for CCUS Delivery

CCUS infrastructure should increasingly be considered alongside other nationally significant infrastructure assets that support economic growth, energy resilience and industrial competitiveness.

The successful delivery of the UK's CCUS ambitions will depend not only on infrastructure and investment, but also on a supportive policy environment. CCUS underpins industrial decarbonisation, low-carbon power, hydrogen, sustainable aviation fuel, greenhouse gas removals and regional growth. Effective delivery therefore requires coordination across industrial strategy, skills, planning, energy markets, infrastructure and trade policy.

Below we highlight areas requiring an integrated policy approach to help accelerate deployment, maximise the value of public investment and provide investors with the long-term policy certainty needed to support growth across the carbon management value chain

Developing Regional Skills and Supply Chains

As projects move into construction and operation, workforce and supply-chain requirements are becoming increasingly important. Government should ensure that existing industrial, innovation and workforce programmes are aligned with the needs of the CCUS sector, helping develop domestic capabilities while supporting regional growth. Government should also ensure CCUS is embedded within emerging regional industrial strategies, local growth plans and mayoral economic strategies, particularly in areas hosting industrial clusters, major infrastructure projects and energy-intensive industries.

Recommendations include coordinated workforce planning across CCUS and adjacent sectors; targeted training programmes; investment in apprenticeships and technical skills and alignment with wider green jobs initiatives.

Strengthening UK supply chains will allow more of the benefits of deployment to be retained domestically, while creating export opportunities as international carbon management markets develop.

Improving Planning and Permitting

Experience from the first wave of CCUS projects has demonstrated the importance of efficient planning, consenting and permitting processes. Industry continues to face a complex regulatory landscape involving multiple departments, regulators and consenting authorities. As deployment scales, Government should ensure that planning, permitting and regulatory requirements are better coordinated and adequately resourced, reducing unnecessary complexity while maintaining robust environmental and safety standards.

Government's wider programme of regulatory reform, planning reform and infrastructure consenting reform presents an opportunity to accelerate CCUS deployment. Industry would welcome efforts to streamline decision-making, reduce

duplication across regulators and ensure statutory bodies are appropriately resourced to support nationally significant CCUS infrastructure projects.

Government should work with regulators to establish a more streamlined and coherent regulatory framework for CCUS deployment, helping projects navigate permitting requirements more efficiently and reducing development risk for investors.

Lessons from Track 1 projects should be used to identify opportunities for greater alignment across the regulatory landscape.

Supporting Industrial Competitiveness

The UK's broader industrial support mechanisms should recognise the strategic role of CCUS in enabling industrial competitiveness, energy security and regional growth. Businesses operating within the CCUS value chain should be able to access appropriate support through wider competitiveness and industrial growth programmes.

In particular, Government should review whether schemes designed to support strategic industrial sectors, such as the British Industrial Competitiveness Scheme (BICS), adequately reflect the contribution of CCUS to the delivery of the Industrial Strategy, Clean Energy Superpower mission and wider economic growth objectives. We would encourage eligibility for BICS to be kept under review, as CCUS is relatively nascent with a developing supply chain - thus electricity support should continue to go where it most needed and where new supply chains emerge.

By establishing a coherent and joined-up policy framework, Government can maximise the impact of existing investment, accelerate deployment and strengthen the UK's position as a global leader in carbon management.

Part B: Developing a predictable framework for deployment and market transition

2d. Work with industry to capture and share lessons from the initial cluster process to reduce costs and accelerate future deployment

The progression of the UK's first commercial-scale CCUS projects provides enables the design of a more efficient deployment framework for future projects. Practical experience from contracting, construction, procurement, operational and cross-chain risks, financing and regulation can help reduce costs, improve delivery timelines and increase investor confidence. The infographic below, taken from the CCSA report 'Driving Cost Reductions and Value for Money in CCUS' demonstrating how pulling levers could result in significant reductions in CAPEX and OPEX cost in future projects.

Construction activity is already providing valuable lessons on project delivery, workforce requirements, procurement strategies and infrastructure integration. Early experience from first-of-a-kind projects can help identify opportunities to improve construction sequencing, reduce delivery risks and increase efficiency.

Project delivery is helping identify supply-chain constraints that could affect future deployment. Understanding where skills shortages, manufacturing capacity challenges or procurement bottlenecks exist will enable Government and industry to target support more effectively, strengthen domestic capability and improve readiness for larger-scale deployment.

The development of the UK's CCUS business models has demonstrated how public support can unlock private investment in emerging infrastructure. Capturing lessons from financing processes, investor engagement and contractual negotiations will help refine future allocation processes and support a more efficient pathway to investment decisions.

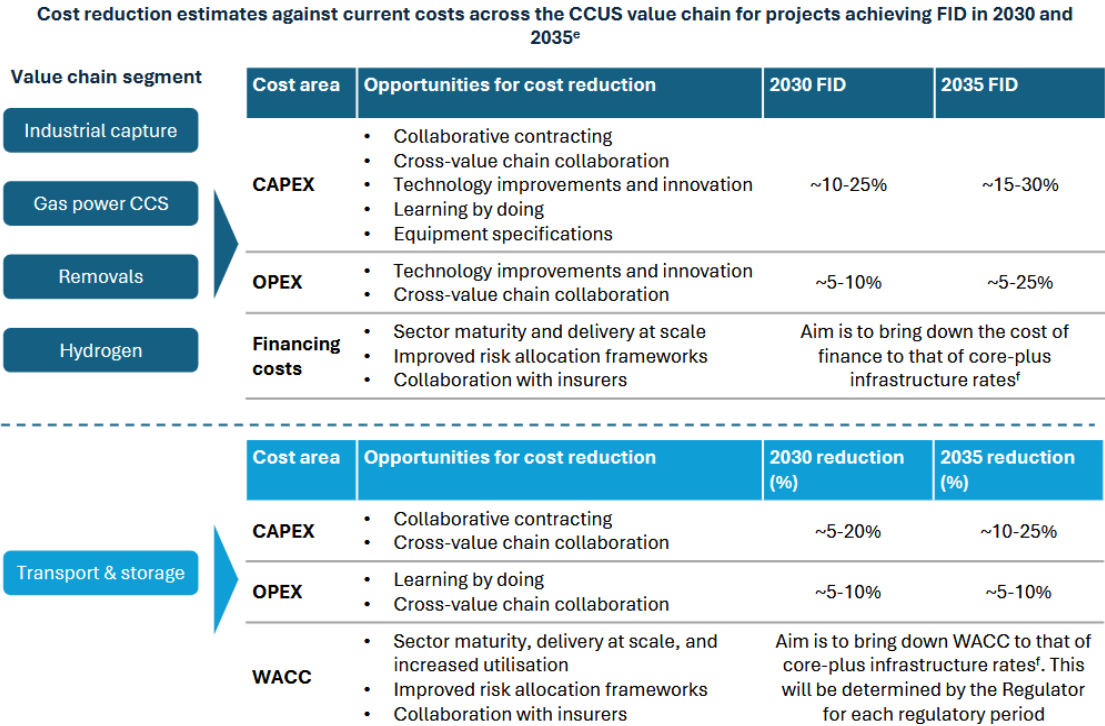
Delivery is also providing lessons on practical experience of planning, consenting and permitting processes. Engagement with local authorities, regulators and statutory bodies is highlighting opportunities to streamline decision-making, improve coordination and reduce unnecessary delays while maintaining high environmental and safety standards. Consideration should be given to improving resourcing for local authorities and regulators involved in major infrastructure projects, reducing delays while maintaining appropriate environmental and safety standards. Government should also review whether local planning authorities and regulators have sufficient resources to support efficient delivery of future CCUS projects.

Where commercial or permitting restrictions currently limit the sharing of project experience, Government should work with industry and regulators to identify mechanisms that allow lessons to be disseminated without compromising commercially sensitive information.

Capturing lessons from the first wave of projects should also include an assessment of how risk allocation and insurance arrangements evolve during project delivery. Understanding which risks can be effectively managed by commercial insurers, and how this changes as the sector matures, will help inform future business model design, reduce financing costs and support the gradual transition of risk from public support frameworks to private markets.

Finally, lessons from Track 1 negotiations highlights the importance of flexibility within the Business Models to build upon an investible baseline contract to meet individual project requirements while remaining value for money for government.

By creating mechanisms to share knowledge and best practice, Government can strengthen future project delivery, support cost reduction and maximise the value of the experience being generated through current investments.



Part B: Developing a predictable framework for deployment and market transition

3. Expand access to CCUS by enabling industries across the UK to utilise alternative CO₂ transport solutions, including shipping, road and rail, ensuring more dispersed industrial sites can connect to CO₂ storage infrastructure.

Non-Pipeline Transport (NPT) should be recognised as strategic national CCUS infrastructure, enabling emitters across the UK to access carbon storage regardless of proximity to pipeline networks. By extending access to storage and increasing utilisation of UK T&S assets, NPT can help deliver a genuinely UK-wide carbon management market. As the sector matures, NPT should be afforded strategic policy parity with pipeline-connected projects.

NPT will play a critical role in extending CCUS beyond the UK's initial clusters. Enabling CO₂ transport by ship, rail and road can connect dispersed emitters to permanent storage. Around one-third of UK CO₂ capture projects already expect to rely on NPT, a proportion likely to increase as the market develops.

Beyond enabling decarbonisation, NPT can unlock private investment, support ports and logistics infrastructure, strengthen regional economies and ensure the benefits of CCUS are shared more widely across the UK. It is also a market-led opportunity, with first-mover CO₂ terminals and shipping infrastructure already attracting private sector investment.

The Government's NPT market framework consultation and Pathfinder competition are welcome steps forward. The priority now is to conclude both processes ahead of CSR27 and provide clarity on eligibility criteria, allocation processes, contracting routes and long-term regulatory arrangements. Continued uncertainty risks slowing investment decisions and delaying deployment. Government should also consider targeted mechanisms to address low-probability, high-impact cross-chain risks while ensuring routine commercial risks remain with the private sector.

Shipping will also be particularly important in enabling future cross-border CO₂ markets explored in Part C.



Part C: Developing markets to deliver a self-sustaining sector

4. Deliver the policies and regulatory frameworks needed to support a self-sustaining CCUS market, including cross-border CO₂ transport and storage with Europe, low-carbon product markets and greenhouse gas removal markets.

4a. Agree to EU UK ETS alignment as part of upcoming EU UK Summit, with new date confirmed as soon as possible, along with delivery of a comprehensive CBAM.

The UK has a unique opportunity to become a leading carbon management hub for Europe. With around 78Gt of CO₂ storage capacity in the UK Continental Shelf, world-class offshore expertise and a growing transport and storage network, the UK is well placed to support European decarbonisation while generating investment, skilled jobs and export revenues.

This opportunity is growing as European countries expand carbon capture deployment. The EU's Net-Zero Industry Act sets a target of at least 50 MtCO₂ per year of injection capacity by 2030, highlighting the scale of future demand for CO₂ transport and storage services.

Cross-border CO₂ transport and storage can strengthen the economics of UK networks by increasing utilisation, spreading costs across more users and attracting additional investment. Closer UK-EU cooperation on carbon management would support industrial competitiveness, accelerate decarbonisation and help establish a more integrated European CO₂ storage market.

As such, the ongoing EU-UK negotiations on ETS linkage present an important opportunity to strengthen industrial competitiveness, support decarbonisation and unlock a Europe-wide CO₂ storage market. Linkage is increasingly recognised as a key enabler of cross-border CO₂ transport and storage, helping European emitters access the UK's significant offshore storage capacity while providing a more consistent carbon price signal across both markets.

It is important that the UK and EU prioritise the rescheduling of the next summit and include announcements on EU UK ETS alignment. Recent EU ETS Review proposals further highlight the importance of linkage, with several future CCUS and carbon removals measures dependent on an effective EU-UK carbon market framework.

For CCUS projects with multi-decade investment horizons, regulatory certainty is essential. Industry would welcome greater clarity on the timetable and implementation pathway for ETS linkage, including how it will interact with CBAM, greenhouse gas removals and wider carbon market reforms. A clear framework that supports cross-border CO₂ transport and storage would help unlock investment, reduce carbon leakage risks and maximise the strategic value of the UK's CO₂ storage resource.

In conjunction with this, as the UK and its international partners accelerate industrial decarbonisation, maintaining a level playing field for domestic industry will be critical. Carbon leakage remains a material risk for energy-intensive industries that are expected to play a central role in the UK's industrial strategy and growth ambitions. If domestic producers face higher carbon costs than international competitors, there is a danger that investment, production and associated emissions could shift overseas, undermining both economic and environmental objectives.

The introduction of the UK's Carbon Border Adjustment Mechanism (CBAM) is an important step towards reducing carbon leakage and protecting the competitiveness of UK industry. By applying an equivalent carbon cost to imports, CBAM can help create a level playing field for domestic producers while encouraging decarbonisation across global supply chains.

As implementation progresses, Government should ensure CBAM reflects the realities of UK industry, with appropriate product scope and coverage of trade-exposed sectors. In particular, consideration should be given to sectors currently outside the proposed scope, including refining and chemicals, which face significant carbon leakage risks and are expected to rely on CCUS to decarbonise. The UK should also seek dynamic alignment with the EU CBAM to minimise administrative burdens and avoid competitive distortions.

Many of the sectors most exposed to carbon leakage are also those most likely to require CCUS. Ensuring that carbon pricing, border measures and industrial decarbonisation policies operate coherently will strengthen the investment case for low-carbon manufacturing, support deployment of CCUS and provide the certainty needed for long-term industrial decarbonisation.

Part C: Developing markets to deliver a self-sustaining sector

4b. Secure additional London Protocol agreements to unlock cross-border CO₂ storage markets

To unlock the opportunity of cross border storage, progress is needed on the international legal, regulatory and commercial arrangements that underpin cross-border CO₂ transport and storage. The UK should build on recent momentum by pursuing additional bilateral agreements with key European partners and ensuring that domestic regulatory frameworks are ready to accommodate future international CO₂ flows.

The recent UK-Belgium agreement under the London Protocol represents an important step forward and demonstrates growing international confidence in the UK's storage potential. Building on this progress, Government should prioritise MOU agreements with other priority markets and European countries including EU members states and EEA states, which play significant roles in the future European carbon management market.

Alongside international agreements, industry would welcome greater clarity on domestic licensing arrangements and regulatory readiness. Storage operators, transport providers and potential international customers require confidence that the UK's regulatory framework will be capable of supporting cross-border transportation and storage at commercial scale. Establishing this framework early will help strengthen investor confidence and support the development of merchant storage business models.

Practical arrangements relating to customs, border processes, emissions accounting and regulatory oversight will also need to be developed as cross-border markets mature. Early engagement on these issues will help remove barriers to investment and ensure the UK is positioned to capture a leading share of future European carbon management demand.

Government should provide early confidence to storage licence holders that appraisal programmes can continue and that existing licences will not become a barrier to continued development while future allocation arrangements are established.

Beyond the provision of physical CO₂ storage capacity, the UK has an opportunity to export the wider expertise developed through its domestic CCUS programme. As international carbon management markets develop, this expertise can become an important source of export growth for UK companies, supporting specialist services, technology providers, engineering firms and supply-chain businesses. Government should therefore treat cross-border CO₂ storage not only as a decarbonisation opportunity, but as a strategic export industry, and actively work to continue securing the first-mover advantage for UK businesses while reinforcing the UK's position as Europe's leading carbon management hub.



Part C: Developing markets to deliver a self-sustaining sector

4c. Create demand for low-carbon products through standards and green public procurement

Material and energy security are fundamental to national security and resilience in times of geopolitical uncertainty. The long-term success of the UK CCUS sector will depend on robust markets for the products and services it enables. Demand signals for low-carbon products and verified carbon removals can attract private investment, improve project economics and reduce reliance on government funding.

Government as a Market Leader

The UK Government remains one of the country's largest purchasers of construction materials, fuels and industrial products. While procurement policy is increasingly focused on jobs, skills and economic value, public purchasing decisions can still play an important role in creating the market certainty required for strategic industrial investment.

For emerging low-carbon products, the key challenge is often not technology readiness but the absence of reliable demand signals. Manufacturers considering investment in low-carbon cement, fuels, chemicals and other CCUS-enabled products require confidence that future markets will exist before committing capital to production facilities.

Government can support this transition without creating new subsidy schemes by providing long-term visibility of future demand and ensuring that public infrastructure programmes recognise the value of domestically produced strategic materials. This can be done by using public procurement powers to buy materials and products from low carbon domestic sources. This would support investment, strengthen UK supply chains and improve the resilience of industries that are fundamental to economic growth.

Government should also develop a framework for Carbon Capture and Utilisation (CCU), including support for standards, life-cycle accounting methodologies and routes to market for CCU-enabled products.

A combination of low-carbon product standards, carbon labelling schemes and procurement requirements would create stronger incentives for investment while helping build domestic markets for UK-produced low-carbon materials. Such measures would also support the competitiveness of UK manufacturers as low-carbon product markets emerge internationally.

Material Security and Economic Resilience

National resilience increasingly depends not only on energy security, but also on secure access to the materials required for infrastructure, defence, housing and industrial development.

CCUS enables the continued domestic production of cement, lime, fuels, chemicals and other strategically important products while reducing emissions. Maintaining these capabilities in the UK reduces reliance on imports, strengthens supply chains and helps ensure that future infrastructure projects can be delivered using secure domestic sources of supply.

Cement imports have nearly tripled over the past 20 years, increasing from 12% of UK sales in 2008 to 32% in 2024, while domestic production has fallen to its lowest level since 1950¹⁷.

A stronger market for UK-produced low-carbon materials would therefore support multiple government objectives simultaneously, including economic growth, industrial competitiveness, regional employment, material security and decarbonisation.

Sustainable Aviation Fuel

The Sustainable Aviation Fuel (SAF) Mandate demonstrates how clear long-term demand signals can unlock investment in emerging low-carbon industries. By creating a predictable route to market, the mandate has improved investor confidence and supported the development of domestic SAF production capacity. The same market-creation principles should be considered across other CCUS-enabled products and sectors.

CCUS will play a critical role in the delivery of multiple SAF production pathways and is therefore an important enabler of the Government's aviation decarbonisation ambitions. In addition to the mandated UK requirements, analysis suggests that global SAF demand is expected to grow rapidly over coming years, creating a significant opportunity for UK investment, manufacturing and exports. Global SAF demand is expected to increase more than sixfold by the end of the decade, reaching 12.8 million tonnes in 2030 from around 2.1 million tonnes in 2025¹⁸. Supporting CCUS-enabled SAF projects can help strengthen energy security, reduce aviation emissions and establish the UK as a leader in low-carbon fuels.

Further, the SAF Mandate could be strengthened by introducing a well-designed Greenhouse Gas Removals (GGR) requirement, allowing suppliers to meet a proportion of their obligation through permanent removals. Introduced on a pragmatic timeline, and in line with the Independent GGR Review, this would provide clear routes to market for both SAF and GGRs while supporting competition between decarbonisation options as the markets mature.

17 Mineral Products Association (MPA), UK Concrete and Cement Industry Roadmap to Beyond Net Zero, 2025
18 SkyNRG 2016 SAF market outlook, in partnership with ICF, 2026

Part C: Developing markets to deliver a self-sustaining sector

4d. Stimulate early reliable demand for high-quality, durable GGR credits through targeted policy incentives such as sectoral mandates and clear green claims guidance

Greenhouse gas removals will be essential to achieving the UK's carbon budgets and net zero targets, particularly in addressing residual emissions from hard-to-abate sectors. However, current demand signals remain insufficient to support investment at the scale required for engineered removals technologies such as BECCS, DACCS and Waste-to-Energy CCS (WECCS).

Government should prioritise the development of a credible and investable market for durable carbon removals by creating early demand, providing certainty on the role of GGRs within compliance markets and supporting high-integrity market standards. Without sufficient secure demand for GGR credits, project reliance on government revenue support increases. The core revenue provided to GGR projects through credit sales, either via the voluntary or compliance carbon markets, reduces the cost and liability to the UK government of developing this infrastructure and building a self-sustaining GGR value chain that delivers economic growth to the UK.

As highlighted in the CCSA's *Capturing the GGR Opportunity*¹⁹ position paper, Government should focus on four priorities:

- 1) **Stimulate early reliable demand for high-quality, durable GGR credits** by bridging the gap between compliance and voluntary market mechanisms, for example through; implementing sectoral mandates in aviation and data centres. The integration of GGRs with the SAF Mandate, as recommended by the Independent GGR Review, should be introduced on a pragmatic timeline, to enable both a clear route to market for SAF production and GGRs. In addition, providing clarity on credible corporate green claims and harnessing global demand through a UK-led buyers' club and

Article 6.2 under the Paris Agreement are also important non-fiscal levers than should be explored.

- 2) **Ensure CCUS business models are investable and bankable** for early GGR deployment by addressing risk allocation and bankability concerns in the GGR business model, addressing volume risk and finalising the Power Bioenergy CCS (BECCS) business model, and implementing the Non-Pipeline Transport (NPT) business model. We also note that WECCS projects can play an important role in delivering removals while supporting the build-out of UK waste management infrastructure. Enabling eligible projects to participate in GGR markets alongside existing support mechanisms, which is currently restricted within the Waste ICC business model, would improve project bankability, attract investment and reduce overall public support requirements.
- 3) **Ensure ambition to bring GGRs into the UK ETS by 2029 is legislated** for in good time to ensure full integration is achieved in this Parliament. This will be particularly important in providing a long-term route to market for GGRs and reducing reliance on direct subsidy.
- 4) **Build confidence in the GGR market** by rationalising the development of flexible, well aligned, and innovation-driven standards that support first-of-a-kind deployment.

Analysis included in the paper indicates that establishing a functioning private-sector GGR market could reduce government support requirements by around £1bn per year in the 2030s, rising to over £3bn per year by 2050, generating up to £35bn of cumulative taxpayer savings by mid-century.



¹⁹ CCSA, *Capturing The GGR Opportunity*, 2026. <https://www.ccsassociation.org/news/as-uk-ccus-projects-move-into-construction-ccsa-calls-for-action-to-unlock-greenhouse-gas-removals/>

Part C: Developing markets to deliver a self-sustaining sector

4f. Create a Long-Term Market Framework for CCS-Enabled Power

CCS-enabled power will play an increasingly important role in delivering a secure, resilient and decarbonised electricity system. As electricity demand grows through electrification, data centre deployment and wider economic expansion, the UK will require sources of low-carbon dispatchable generation capable of complementing renewable electricity and maintaining security of supply during periods of system stress. CCS-enabled power is uniquely positioned to provide this capability while supporting wider carbon management objectives.

As the market matures, policy should focus on creating conditions in which CCS-enabled power can derive a greater proportion of its revenues from market mechanisms rather than bespoke support arrangements. This transition will require evolution of electricity market arrangements, carbon pricing frameworks and capacity mechanisms to better reflect the system value provided by reliable low-carbon dispatchable or baseline generation. Decarbonisation of the grid, including Clean Power 2030 ambitions will require timely, firm grid connections.

A key objective should be ensuring that market signals appropriately reward flexibility, reliability and carbon performance. Existing market arrangements do not always fully recognise the value provided by dispatchable low-carbon generation during periods of low renewable output, system stress

or network constraints. Reforming these arrangements would improve investment incentives while helping reduce future support requirements.

Electricity market reform should also support a gradual transition towards more market-based revenues. Reforms which better reflect locational value, flexibility services and system resilience can strengthen commercial returns for CCS-enabled power assets, reducing reliance on bespoke support mechanisms over time. Combined with stronger carbon pricing signals and improved access to T&S infrastructure, this can provide a pathway towards a more commercially sustainable sector.

The UK is seeking to establish itself as a global hub for digital infrastructure and AI-enabled growth. The National Energy System Operator (NESO) expects annual electricity consumption by data centres to rise from 7.6 terawatt hours today to between 20 and 41 terawatt hours by 2035²⁰. Delivering this ambition will require secure, high-availability and low-carbon power supplies. CCS-enabled generation can play an important role in meeting these requirements and supporting future economic growth while maintaining progress towards decarbonisation and energy security objectives.



The Carbon Capture and Storage Association (CCSA) is the trade association focused on accelerating the commercial deployment of carbon capture, utilisation and storage (CCUS).

We work with our members, governments and other organisations to ensure CCUS is developed and deployed at the pace and scale necessary to meet net zero goals and deliver sustainable growth across regions and nations.

The CCSA has over 100 member companies who are active in exploring and developing different applications of carbon capture, CO₂ transportation by pipeline, ship and rail, utilisation, geological storage, and other permanent storage solutions, both end-users of the technology and those in the supply chain, as well as members from management, legal and financial consulting sectors.

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