Carbon Capture & Storage Association

Report Summary

CCUS Vision: Future Business Models and Allocation Frameworks

April 2025

The CCSA's 2025 report, *Driving cost reductions and value for money in CCUS*, concludes that to ensure the delivery of an established and mature CCUS sector, Government should **confirm the approach to future funding allocation** as the industry transitions from the current market creation phase to a self-sustaining sector.

This briefing summarises research conducted by Baringa on behalf of the CCSA, seeking input from our 130+ members, who together work across the whole CCUS value chain. The research captured views on the future CCUS funding allocation that should follow the successful deployment of the initial tranche of critical projects. The findings aim to support dialogue between Government and industry, helping to shape future allocation frameworks which will in turn strengthen investor and developer confidence.

This piece of work is intended to start the discussion between the CCUS sector and the Government. It sets out the range of options that could be considered in planning for the future of CCUS in the UK.

Completing delivery of the CCUS market creation phase

The projects currently in line for government support – Track-1, Track-2 and Track-1 Expansion – alongside other clusters delivering on the same timescales, have potential to capture and store almost 25Mtpa of CO_2 by 2030. This will create a strong foundation to deliver the 50-60 Mtpa 2035 ambition.

This will catalyse billions of pounds of private sector investment, create and protect thousands of jobs in the UK's industrial heartlands, and add significant value to the UK economy. It will play a key role in delivering the UK Government's Industrial Strategy, Missions, Infrastructure Strategy and decarbonisation targets.

It is critical that supporting policy decisions are now advanced quickly to provide investors and developers with a clear route to market and see this phase properly realised.

Evolving allocation frameworks to deliver a self-sustaining market

Key findings from the research highlight that:

- **Investors value continuity** in business model and support allocation.
- **Market integration** between capture support and end markets should be improved.
- There is scope to enable **greater commercial innovation** e.g. low carbon product mandates and greenhouse gas removal (GGR) frameworks.
- The **risk-return profile in CO_2 transport and storage** could be improved and, in turn, reduce government support.
- **Investors want greater certainty** on the frequency, timing and funding envelope for allocation and more streamlined licensing, permitting and planning.

Government's role in coordination and funding allocation remains key to enabling the CCUS Vision, but could evolve to focus on the most impactful areas for intervention, whilst facilitating routes to market with less or no government support in others.

Government could enhance wider market policy to support transition to market-led solutions. This includes accelerating delivery of carbon markets with a predictable carbon price and effective carbon border adjustment mechanism; facilitating GGR market development; enabling non-pipeline transport (NPT) and cross-border imports of CO_2 and introducing low-carbon product standards.

Government could adapt the CO_2 transport and storage (T&S) business model to enable NPT and reduce government underwriting through more market-led projects – e.g. a clear NPT approach and enabling merchant capture projects a route to storage.

Government could alter the allocation framework to improve certainty and speed – considering how to increase market confidence through repeatable, more streamlined allocation, and reviewing how winners are selected (e.g. by location or sector, price or multi-criteria). This could involve allocation for new shared infrastructure corridors to accommodate pipeline networks, non-pipeline transport hubs, and storage facilities—either individually or in combination.

Options for potential future funding allocation

Allocation objectives in the CCUS vision
The assessment of options in this study considered how each possible allocation framework would be expected to contribute against the set of objectives which were derived from the Government's CCUS Vision, published in 2023. This included:

- Ability to scale emissions reductions.
- Increase pace of delivery.
- Cost reduction for government.
- Increased return on capital for developers.
- Lower liability for government.
- Increased socio-economic benefit.

Three business model and allocation package options, with varying degrees of change, were considered. These focused on:

Allocation-focused changes, with minimal tweaks to current business models.

Greater market integration, with allocation and business model evolution.

Full transition to a nationwide, sector agnostic, national CfD model.

CCSA member feedback suggested that a national CfD and allocation-focused approach presented challenges in achieving the ambitions of the CCUS Vision and could constrain sector growth. In contrast, a **market integration model** —where the Government maintains coordination and funding responsibilities while enabling market-led development pathways—was seen as a better balance. This approach aligns with the Government's aim to manage costs and liabilities, while still providing the necessary support to deploy CCS across multiple sectors and clusters.

Capture allocation options

The study also considered possible criteria for funding allocation considering location, sector eligibility, and cost options.

1. **Using location-based allocation** would focus on either incorporating more capture projects into existing clusters, or connecting individual capture projects with new stores. This could be done in three ways:
   - *Competition only with existing clusters.* This would maximise existing transport and storage infrastructure, but may limit sector growth and discourage new entrants.
   - *National competition across all clusters.* This has the potential to unlock lower-cost clusters in other regions over the long term; however, existing clusters are likely to retain a competitive advantage in the short term.
   - *New cluster selection based on single capture anchor project with significant additionality.* This would allow focus on high-CO_2 volume, high-deliverability projects and support full-chain CCUS development. However, it may deliver less CO_2 abatement per pound spent compared to a multi-capture project approach.
2. **Sector-based selection and allocation changes** could incentivise the development of certain strategic industries. This could involve:
   - *Allocation of funded contracts to specific emitters from priority sectors to achieve sectoral targets.* Targeted support for power CCUS could drive sector growth, ensure clean power, and enhance energy security. Equally, strategic support for hard-to-abate industries may secure critical assets and supply chains. However, sector-based support and targets risk making unselected assets uncompetitive, potentially leading to early closures or relocation abroad.
   - *CO_2 volume targets for specific sectors.* Reaffirming and introducing sector-specific volume targets would enhance transparency, giving each sector clearer expectations about contract availability and increasing certainty of success. This would focus competition within sectors rather than across them.
   - *Set a minimum ETS price in certain protected sectors.* This could accelerate decarbonisation in sectors capable of investing based solely on a reliable carbon price signal. However, it may lead to market distortions and unintended consequences across the broader decarbonisation effort.
3. **Allocation based solely on cost.** Price-based auctions could deliver strong value for money by maximising the volume of CO_2 captured per pound spent and simplifying allocation, potentially increasing competition and lowering costs across sectors. However, this approach risks undermining net zero goals, favouring lower-cost projects in existing clusters and limiting regional investment, job creation, and broader decarbonisation. This in turn could threaten clean power targets, supply chain security, and industrial resilience. Additionally, unreliable cost estimates in early-stage projects could make price-based selection less effective.

Recommendations

Key recommendations arising from the study are:

1. **Role of government: Government should decide and communicate what it considers to be the future role of the state in the CCUS sector.** Considerations will need to be made across policy, regulation, cluster coordination, funding and allocation of support contracts for CCUS projects. Clear ambitions, a defined funding envelope, and an effective institutional framework are essential. While risk underwriting may still be needed during the transition, overall subsidies should decline as market-based abatement policies take hold.
2. **Value chain economics: Government and industry to work towards a better understanding of the potential changes that could drive commercial returns and enable the reduction of government subsidies.** These include:
   - **Carbon market developments:** including a more predictable Emissions Trading Scheme (ETS) price aligned with a net zero trajectory and effective measures to address carbon leakage, such as a well-implemented carbon border adjustment mechanism (CBAM); expanded carbon markets to monetise GGRs; and regulatory equivalence for CO_2 storage between the UK and EU ETS.
   - **Regulatory drivers:** such as development of low carbon product standards, mandates and/or kitemarks, as well as a clearer role and regulation for engineered GGRs. This could include the use of further sector mandates or public sector procurement obligations.
3. **CO_2 transport & storage development: Government and industry, in the medium to long term, should consider developing an increasingly market-led route for storage developers, and appropriate disaggregation and varied commercial models for different forms of CO_2 transport. Considerations for the evolution of the regulatory investment model include:**
   - Consider the options that would enable stores that are wholly or partially free from government support and/or economic regulation, including the potential for a reduction of support over time and/or removing economic regulation from existing stores that wish to expand.
   - Unbundle the transport and storage economic license, noting economic regulation for pipelines is likely to continue to be needed. This would enable different commercial models to emerge and market participants with different risk/reward appetites to develop, own and operate assets.
   - Implement appropriate models for non-pipeline transport, which could include economic regulation where conditions require it but enabling commercial innovation through economically unregulated models where possible.
   - Allow and enable cross-border storage in the UK of CO_2 captured in other jurisdictions, to underpin regional decarbonisation and support the investment case. This would enable industry to leverage the business opportunity of providing storage as a service in the UK, realising the potential of the North Sea and securing the offshore sector for decades to come.
   - Consider how to incorporate revenue from CO_2 capture projects developed on a merchant basis alongside those under government support within transport and storage entities that themselves may be receiving direct government support – drawing on existing industry examples in the UK and abroad.

We are committed to working with DESNZ and all other relevant departments and stakeholders to accelerate the commercial deployment of CCUS.

This report brings together the collective perspectives of CCSA members, gathered through workshops, a survey, and one-to-one meetings, where they offered insights on the current funding allocation and policy landscape, as well as opportunities for future improvement as the sector evolves. Baringa assessed the suggested options, and this briefing is a summary of the results.

If you are interested in finding out more, please contact: **info@ccsassocation.org**

This work was sponsored by eleven CCSA members, who contributed funding to the project and formed the steering committee. We are very grateful for their support. We would also like to acknowledge the role of Baringa in shaping and delivering the project.

Project sponsors include Kellas Midstream, Storegga, Equinor, Uniper, SEEL and Drax.

About the CCSA

The CCSA is the lead European association accelerating the commercial deployment of carbon capture, utilisation and storage (CCUS) through advocacy and collaboration.

The CCSA acts as the voice of the CCUS industry. Our members are at the core of everything that we do – their input shapes our strategic direction, our positions and our messaging. Find out more at: **www.ccsassociation.org**