

FACTSHEET - Carbon Dioxide Removal

Country Report: United Kingdom

The United Kingdom's carbon management framework relies on a dual strategy of targeted state subsidies for infrastructure and subsequent market integration. Anchored in the Climate Change Act 2008 and the Energy Act 2023, the statutory architecture legally recognizes technical removals and establishes a comprehensive licensing regime for CO₂ transport and storage. The UK is currently operationalizing this framework by committing up to £21.7 billion for initial CCUS clusters, utilizing carbon management primarily as a tool for regional economic revitalization. To ensure long-term commercial viability, the government has established the Green-house Gas Removals Business Model and confirmed the integration of verified, UK-based engineered removals into the UK Emissions Trading Scheme by 2029, employing a strict "one-for-one" allowance replacement mechanism to maintain carbon accounting integrity.



Legal Framework & Targets

The United Kingdom's carbon management framework is anchored in the Climate Change Act 2008, which mandates net-zero emissions by 2050 and establishes legally binding five-year carbon budgets. The statutory definition of carbon removal was significantly expanded by the Energy Act 2023: whereas previous frameworks only recognized land-use (LULUCF) sinks, Section

29(1)(b) explicitly incorporates technical „processes, mechanisms or activities“ that remove CO₂ from the atmosphere. Despite ambitious projections by the Climate Change Committee (CCC) targeting 35.8 million tons of engineered removals annually by 2050, the CCC's 2025 progress report confirms that the UK currently lacks commercial-scale engineered removal deployment.¹



Economic Instruments

The UK approach relies on a dual strategy of massive state subsidy for initial infrastructure and subsequent market integration. In late 2024, the government confirmed £21.7 billion in funding over 25 years to operationalize the first two CCUS infrastructure clusters known as Track-1.² To commercialize engineered removals, the government finalized the Greenhouse Gas Removals (GGR) Business Model in August 2025, providing

a revenue support mechanism for early projects. Crucially, the UK Emissions Trading Scheme (UK ETS) Authority confirmed in July 2025 that verified, UK-based engineered removals will be integrated into the UK ETS.³ Operational integration is targeted for 2029, utilizing a strict „one-for-one“ mechanism where newly issued removal credits permanently replace and retire regular emission allowances to maintain the overall emissions cap.⁴



Infrastructure & Permitting

The Energy Act 2023 establishes the comprehensive statutory framework for a national CO₂ transport and storage network. Under the Act, operating CO₂ pipelines and geological storage sites requires a strict licensing regime overseen by the Gas and Electricity Markets Authority (GEMA) as the designated

economic regulator. Additionally, the North Sea Transition Authority (NSTA) is granted statutory powers to mandate data reporting from license holders to map national storage capacities. Internationally, the UK ratified the 2009 Article 6 amendment to the London Protocol, actively engaging in bilateral Green

1 Climate Change Committee (CCC), The Seventh Carbon Budget (2025), p. 269.

2 UK Government, UK Carbon Capture, Usage and Storage (CCUS) Collection (2025). <https://www.gov.uk/government/collections/uk-carbon-capture-usage-and-storage-ccus>

3 UK ETS Authority, Integrating Greenhouse Gas Removals in the UK ETS: Main Response (2025). <https://assets.publishing.service.gov.uk/media/689cda8487bf475940723f5b/uk-ets-ggrs-main-response.pdf>

4 Ibid., p. 3-5.

Industrial Partnerships—including agreements with Norway,⁵ France,⁶ and Germany⁷—to establish the legal parameters for transboundary CO₂ transport and sub-sea storage.



Monitoring, Reporting, Verification & Transparency

The UK is currently codifying strict MRV requirements to govern the issuance of removal credits. Under the finalized UK ETS integration rules, engineered removal projects must demonstrate rigorous verification and ensure carbon sequestration permanence for a minimum of 200 years.⁸ Liability for stored CO₂ is governed by the Storage of Carbon Dioxide (Termination of Licences) Regulations 2011, under which responsibility for

leakage may transfer from the operator to the appropriate Minister upon termination of the storage licence. Furthermore, the Environmental Damage (Prevention and Remediation) Regulations 2015 explicitly extend environmental remediation responsibilities to the operators of CO₂ storage sites during their active lifecycle.



Just Transition & Equity

Unlike the EU's structured Social Climate Fund, the UK's integration of equity within carbon management is primarily geographic and economically driven rather than strictly rights-based. The state-funded CCUS cluster strategy is explicitly designed as a regional economic revitalization tool, targeting post-industrial regions to protect existing heavy-industry jobs and generate new clean-tech employment.⁹

However, the integration of GGRs into the UK ETS has sparked ongoing domestic debate; civil society groups express concern that allowing hard-to-abate sectors to purchase removal credits may weaken direct emission reduction efforts and prolong localized industrial pollution in disadvantaged communities.

5 UK Government, Green Industrial Partnership UK-Norway Memorandum of Understanding (2025).

6 UK and France Joint Energy Statement.

7 UK and Germany Joint Declaration of Cooperation on Energy and Climate.

8 UK ETS Authority, Integrating Greenhouse Gas Removals in the UK ETS: Main Response (2025), p. 4, 22, 38.

9 UK Government, UK Carbon Capture, Usage and Storage (CCUS) Collection (2024); “Government Reignites Industrial Heartlands” (2024).

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