Demonstrating sustainable value creation from industrial CO2 by its thermophilic microbial conversion into acetone

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STRATEGIC INTELLIGENCE BULLETIN 11

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Responsible Author(s)	Laurianne BOUVIER		
Contributor(s)	AXELERA		
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FOREWORD

We are delighted to release the eleventh strategic intelligence bulletin.

In the face of the escalating global climate crisis, the pursuit of sustainable and effective solutions has never been more urgent. This strategic bulletin delves into one such solution: Carbon Capture, Utilization, and Storage (CCUS), a technology that could play a pivotal role in our journey towards a carbon-neutral future.

This strategic bulletin provides a curated overview of critical developments shaping the CCU landscape today. It synthesizes technology watch insights, market information, and EU policy context to inform strategic decisions and prioritisation. Readers will find current EU policy frameworks, funding and tender opportunities, and details on EU-funded projects and upcoming events that are relevant to CCU initiatives. By connecting technological advances with policy signals and funding prospects, this bulletin aims to support proactive planning, stakeholder coordination, and strategic investment to accelerate the deployment of CCU solutions across Europe.

We hope that this report serves as a valuable resource in your quest to understand and contribute to the global effort against climate change. The journey towards a sustainable future is a challenging one, but with informed decisions and strategic actions, we can make significant strides in the right direction.

Do not hesitate to send us any comments to improve this document by writing or sharing information that could be relevant for the next bulletin to laurianne.bouvier@axelera.org

Have a good read!

AXELERA

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MARKET INFORMATION

EUROPE CARBON CAPTURE AND STORAGE MARKET SIZE

The recent market study by GM Insights (2024) on the European CCUS market highlights that the sector was valued at around USD 1.2 billion in 2024, with an expected CAGR of 24% from 2025 to 2034. The growth is driven by climate policies such as the European Green Deal, rising investments in industrial decarbonization, and advancements in capture technologies. Key sectors include cement, steel, and chemicals, with shared infrastructure in clusters enabling cost efficiency. Challenges remain in high capital costs and regulatory complexity, but government incentives and cross-border cooperation accelerate deployment. This study underscores CCUS as a vital tool for Europe's path to net-zero emissions.

For more information, please click here.

THE CLEAN ENERGY OBSERVATORY: CARBON CAPTURE, UTILISATION AND STORAGE IN THE EUROPEAN UNION – 2025 STATUS REPORT

The "Clean Energy Technology Observatory: Carbon Capture, Utilisation and Storage in the European Union - 2025 Status Report" by the European Commission's Joint Research Centre evaluates CCUS maturity, tracking R&I progress, capacities, costs, patents, markets, and EU competitiveness to align with Green Deal targets like 80-500 Mt/year storage by 2030/2050.

Key Takeaways

- **Technology Maturity and Innovation:** Capture technologies (post-combustion, DAC) advance with EU leadership in sorbents and electrochemical methods; utilization grows in chemicals/fuels, but scale-up lags due to energy/cost hurdles.
- **Value Chains and Deployment:** Gaps persist in transport/storage infrastructure and industrial clusters; EU turnover/employment rise, needing private funding and cross-border ties for hard-to-abate sectors like cement/steel.
- **Market and Policy Drivers:** Costs decline via incentives, but regulatory streamlining for sites and policy support are essential; CCUS is vital for net-zero, with strong patent/publication trends signaling global positioning

The report underscores CCUS as indispensable for EU decarbonization, monitoring installed capacities (rising pilots), economic impacts, and sustainability. It urges integrated strategies to bridge lab-to-market gaps, boost investments, and ensure 2050 goals amid competitiveness pressures;

For more information, please click here.

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MARKET STUDY ON CO_2 UTILISATION IN FRANCE

Club CO2 is a French non-profit association that serves as a forum for information exchange, collaboration, and initiatives between industrial stakeholders, researchers, and policymakers involved in carbon capture, utilization, and storage (CCUS) technologies. The Club's mission is to accelerate the development and deployment of CCUS in France by facilitating knowledge sharing, supporting regulatory and industrial progress, and fostering partnerships across sectors. It supports France's transition to carbon neutrality by advancing sustainable CCUS solutions. They recently drove a market study on the valorisation of biogenic CO_2 in France and published a public summary in July 2025.

Key findings include:

- Regulatory Framework: Analysis of standards and regulations specific to biogenic CO_2 from biomass transformation sectors such as methanization, paper production, and ethanol manufacturing.
- Transport Solutions: Examination of logistics challenges to move CO_2 from producers to industrial end-users effectively and safely.
- Industrial Applications: Identification of CO_2 as a valuable raw material in multiple sectors, including chemicals, materials, and energy, key for developing a circular bioeconomy.
- Energy Sector Needs: Projections of increasing CO_2 demand for synthetic fuels and other industrial energy uses.
- Stakeholder Insights: Roundtables provided expert feedback and shared experiences highlighting positive trends and growing industrial maturity.

For more information, please click here.

TECHNOLOGY WATCH

THE MOST HIGHLIGHTED CCU TECHNOLOGIES IN 2025

The most highlighted technologies in 2025 regarding Carbon Capture Utilization (CCU) and specifically CO2 utilisation include:

1. Electrochemical Conversion and Molten Salt Processes (UP Catalyst)

   Technologies converting CO_2 directly into high-value materials such as battery-grade graphite and carbon nanotubes using electrochemical molten salt processes. These innovations reduce energy demand significantly compared to conventional routes.

2. Direct Air Capture (DAC) with Advanced Sorbents : NuAria (US), Carbyon (NL), South ocean air (US), Aerbon (SW), AlpineX (FR)

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Modular, scalable sorbent-based DAC systems that capture CO_2 from ambient air for utilisation, powered by low-carbon electricity. These include voltage-swing adsorption/desorption methods using redox-active materials offering energy-efficient CO_2 binding and release.

3. CO_2-to-Chemicals and Fuels Synthesis (Oxylus Energy, Solar fuel)

   Processes like Sorption Enhanced DME synthesis and green methanol production that convert CO2 into synthetic fuels and chemicals with high conversion rates and reduced downstream processing. Emphasis is on circular carbon economy solutions.

4. Sustainable Polyurethane and Polymer Technologies (Far Eastern New Century)

   CO_2-based non-isocyanate polyurethanes (NIPU) used in elastomeric plastics with lower life-cycle emissions, applied in footwear and textiles.

5. Cryogenic and Membrane Separation Technologies (SLB Schlumberger, MTR Membrane Technology and Research)

   Fully electric cryogenic separation systems and advanced polymer membranes for post-combustion CO_2 capture, achieving high efficiency and purity for industrial emissions.

These leading technologies illustrate how CO_2 is transformed from a waste product into valuable raw materials for batteries, chemicals, plastics, and fuels, contributing to a low-carbon circular economy with improved energy efficiency and scalability.

For more information, please click here.

“BEST CO2 UTILISATION 2025” AWARD AT CO2-BASED FUELS AND CHEMICALS CONFERENCE

The “Best CO2 Utilisation 2025” Innovation Award at the CO2-based Fuels and Chemicals Conference highlights cutting-edge technologies that turn captured CO2 into valuable products like battery materials, plastics, and fuels. It is one of the central program elements of the 13th CO2-based Fuels and Chemicals Conference held in Cologne in 2025 and is positioned as a flagship recognition within the Carbon Capture and Utilisation (CCU) community.

The 2025 edition emphasised solutions that can scale and clearly reduce reliance on fossil carbon, especially in materials, chemicals, and fuels. The top prizes went to:

- An Estonian company (**UP Catalyst**) for producing battery-grade graphite and carbon nanotubes directly from CO2 using an electrochemical molten salt process, with substantially lower energy demand than conventional graphite production.
- A Taiwanese company (**Far Eastern New Century)** for CO2-based non-isocyanate polyurethanes (NIPU) used in elastomeric plastics for footwear and textiles, offering significant life-cycle CO2 emission reductions versus conventional TPU.

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- A US company (**Oxylus Energy**) for a direct electrochemical route to green methanol from CO2, renewable electricity, and water, designed to achieve carbon-neutral or even carbon-negative methanol at competitive cost.

For more information, please click here.

EU POLICIES & LEGISLATION

UPDATED EU CLIMATE GOAL

In November 2025, the EU submitted an updated nationally determined contribution (NDC) under the Paris Agreement with strengthened emissions reduction targets through 2035, reinforcing the push for all mitigation tech, including CCU/CCS, as part of deep decarbonisation efforts.The NDC reiterates net-55 % reduction by 2030 and introduces 66 %–72.5 % by 2035, aligning with more ambitious mid-term goals. CCU/CCS remains embedded in broader EU climate commitments, which influence funding and regulatory focus.

For more information, please click here.

CCS POLICY, LEGAL AND REGULATORY REVIEW

In mid-2025, the Commission adopted a Delegated Regulation setting the rules for identifying and calculating the **obligations of EU oil and gas producers to provide new CO_2 storage solutions**, in line with the Industrial Carbon Management Strategy and the Net-Zero Industry Act. On this basis, it adopted a Decision listing 44 oil and gas companies and assigning each a specific share of the EU target of at least 50 million tonnes per year of operational CO_2 injection capacity in geological storage by 2030.

Why this matter for CCU?

Large-scale CCU deployment in Europe depends on reliable infrastructure for CO_2 transport and storage, especially for permanent storage of process emissions or CO_2 not embedded in products, so making these obligations operational is a key enabler for industrial projects.

Each storage site developed under these obligations will be recognised as a Net-Zero Strategic Project, which can cover capture and transport as part of the CO_2 value chain, improving access to permitting and support mechanisms that CCU projects can tap into.

For more information, please click here.

EU ETS REFORM & CCU TREATMENT

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101037009.

In mid-2025, industry association CO_2 Value Europe released a policy paper urging ETS reform to better recognise captured carbon and incentivise its use in products — highlighting that current ETS rules disadvantage CCU versus fossil feedstocks.

- Prioritising captured carbon in the ETS vs. fossil carbon
- Targeted CCU incentives for the waste-to-energy sector
- Balanced and pragmatic carbon accounting frameworks
- Strategic use of ETS revenues for industrial transition
- Dedicated framework for carbon removals

For more information, please click here.

NATIONAL LEVEL AND BILATERAL ACTIONS

In June 2025, **France and Norway signed a bilateral agreement** on exporting and storing French industrial CO_2 in Norwegian geological formations, aligning with trans-boundary infrastructure needs and underscoring international cooperation on storage.

For more information, please click here.

The London Protocol (1996) is an international treaty aimed at preventing marine pollution from dumping waste at sea.

- Original Article 6 prohibited the export of waste or other matter for dumping at sea, including CO_2 intended for offshore geological storage.
- This prohibition unintentionally blocked cross-border CO_2 transport for offshore CCS, even when storage was environmentally sound.

In 2009, Parties adopted an amendment to Article 6 allowing the transboundary transport of CO_2 streams for geological storage, provided:

  - the CO_2 is destined for permanent geological storage,
  - an agreement exists between the exporting and receiving countries,
  - environmental protection and monitoring obligations are respected.

However, this amendment only applies to countries that ratify it individually

France's Parliament adopted and promulgated a law authorising the **ratification of the LP.3(4)** resolution, which amends Article 6 of the 1996 London Protocol to permit the transboundary transport of CO_2 for geological storage (including offshore storage) under agreed conditions. The law was promulgated on 23 June 2025 and published in the Journal officiel on 24 June 2025, officially authorising ratification. For more information, please click here.

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EU BIOECONOMY STRATEGY

The European Commission adopted a new **Bioeconomy Strategy** on 27 November 2025 to ramp up the EU's competitive, sustainable and circular bioeconomy supporting climate neutrality, industrial leadership, and reduced reliance on fossil raw materials. It builds on past strategies (2012, 2018) but with stronger emphasis on industrial deployment, innovation, and lead markets for bio-based solutions.

Key strategic priorities include:

- Scaling up innovation and investment to bring bio-based technologies from lab to market. Crowell & Moring - Home
- Building lead markets for bio-based materials, chemicals, bioplastics, advanced fermentation products, and bioenergy value chains. Renewable Carbon
- Ensuring sustainable biomass supply and enhanced circularity, prioritising use of residues and secondary streams. Environment
- Strengthening Europe's industrial and global competitiveness in bio-based sectors. European Commission

The strategy is meant to be monitored and assessed on implementation over the next four to six years, with regulatory follow-ups expected through 2026-2028. CCU is not treated as a standalone pillar but it explicitly acknowledges the role of captured carbon — especially biogenic carbon — within circular and low-carbon industrial value chains.

For more information, please click here.

FUNDING AND TENDERS OPPORTUNITIES

FRANCE

CALL FOR PROJECTS – DEMIBAC

France 2030 call by ADEME for SMEs developing low-carbon industrial technologies and services. Open until February 9, 2027 (cut-offs: March 10, 2026; October 13, 2026). Funds mono-partner R&D/innovation projects (<€1.5M total cost, 12-36 months, TRL 5-9) at 35-45% rates (grant/repayable advance). Priorities: energy efficiency (heat recovery, AI), decarbonized heat (CCUS capture/mineralization, CO2-to-chemicals/fuels, GHG reduction), electrification, H2/biogaz, renewables adaptation

For more information, please click here.

CALL FOR PROJECTS – IBAC PME

Relanced France 2030 call targeting industrial-scale demonstrations for low-carbon processes. Supports larger projects (CAPEX-focused) in CCUS, electrification, and biomass, complementing IBaC PME for SMEs. Open through early 2027; emphasizes competitive, scalable tech for hard-to-abate sectors like cement/chemistry. Funding up to tens of millions via grants/advances; part of 5 relanced decarbonization call for projects announced by the French Governement in April 2025.

For more information, please click here.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101037009.

CALL FOR PROJECTS – DECARB FLASH 2025-2027

Accelerated funding track for quick-win decarbonization pilots/studies in industrial zones (ZIBaC). Focuses on fast-track R&D (<24 months) for CCUS bricks, heat recovery, and process optimization. Targets SMEs/medium-size companies; integrates with national CCUS hubs (Dunkirk, Fos-sur-Mer). Open 2025-2027 with rolling evaluations; aids FID preparation via subsidies/carbon contracts.

For more information, please click here.

CALL FOR PROJECTS – INNOVATION & HYDROGEN DEMONSTRATION

The "Innovation and Demonstration Hydrogen" call (ID H2) by ADEME runs from May 6, 2025 to September 25, 2026, with two intermediate deadlines. It supports innovation and demonstration projects to develop or improve hydrogen production, transport, and usage components and systems. Projects must fit into one of four axes: technological building blocks, pilot/demonstration projects, new hydrogen vehicle design, and eco-design/recyclability. The call targets companies or collaborations (up to 5 partners), including optional research labs, with project minimum costs of €1.5 million. Aid rates vary based on company size and project type, supporting research, development, and investment in hydrogen innovation for the energy transition.

For more information, please click here.

EUROPE

INNOVATION FUND 2025

The main call for projects on decarbonisation including the CCUS topic in 2025 is the Innovation Fund 2025 Net-Zero Technologies Call (IF25 NZT Call).

Summary of the Call:

- Launch date: December 3, 2025
- Deadline: April 24, 2026
- Budget: Approximately €2.4 billion for net-zero technologies, plus €1 billion reserved for a battery manufacturing call and hydrogen auctions.
- Focus: The call aims to finance innovative projects that contribute to the EU's climate neutrality goals by supporting large, medium, small, and pilot-scale projects across sectors such as energy-intensive industries, carbon capture, utilization, and storage (CCUS), renewable energy generation, energy storage, net-zero mobility, and building decarbonisation.
- Objectives: Accelerate commercialization and deployment of technologies reducing greenhouse gas emissions, including targeted research and innovation projects to scale up CCUS.

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- Additional: There will be accompanying info days to support applicants explaining key features, evaluation criteria (innovation degree, GHG reductions, technical and financial maturity), and lessons learned from previous rounds.

There is also a dedicated EUR 1 billion pilot auction under the Innovation Fund focused on decarbonisation of key industrial processes, including CCUS, with terms published in October 2025, set to open in early December 2025 to accelerate CCUS technology deployment.

This call represents the EU's largest single opportunity in 2025 to fund CCUS and other decarbonisation initiatives, advancing the green transition and industrial competitiveness well into the 2030s

For more information, please click here.

THE CET PARTNERSHIP JOINT CALL 2025

The CETPartnership Joint Call 2025 includes a dedicated Call Module 2025-04 on Carbon Capture, Utilisation and Storage (CCUS), aimed at accelerating CCUS technologies for climate neutrality by targeting projects that reach TRL 5 or higher, with a focus on cost reduction and industrial-scale deployment across the CCUS value chain.

Objectives and scope

- Supports R&D&I activities in capture, transport, utilisation, storage, and monitoring, contributing to CO_2 emissions reductions for 2030s deployment under TRL 3 (Enabling Climate Neutrality with Storage Technologies, Renewable Fuels and CCU/CCS)
- Targets research organisations, universities, and industrial stakeholders; lower TRL activities allowed if supporting higher TRL goals.

Application

- Two-stage: Pre-proposals (due 9 October 2025, closed) led to invitations for full proposals, open until 12 March 2026 (14:00 CET) via the CETPartnership portal.
- Evaluation criteria: Excellence, Impact, Quality/Efficiency of Implementation.

Eligibility and consortium

- Minimum three independent partners from three countries, with at least two from EU/Associated Countries; adheres to national/regional rules.
- Project duration: 12-36 months; one partner max 60% effort.

Budget and funding

- Indicative €80M total across modules; CCUS share varies by participating agencies (e.g., NOK 40M in Norway, €0.75M via DST India).
- Funding direct from national agencies post-selection; decisions mid-June 2026, starts Sep-Dec 2026.

For more information, please click here.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101037009.

HORIZON EUROPE CLUSTER 4

Horizon Europe Cluster 4 – Digital, Industry and Space is a key funding source for CCUS-related projects. It supports different thematics : manufacturing technologies, key digital technologies including quantum technologies, emerging enabling technologies, advanced materials, AI and robotics, next gen internet, advanced computing and Big Data, circular industries, low carbon and clean industries, space including earth observation.

For 2026, the industry call that includes the **CO_2 capture / purification / utilisation** topic is planned to open in early January 2026 with a deadline around April 2026, but the exact dates and topic code must always be confirmed on the Funding & Tenders Portal and in the official Work Programme part for Cluster 4.

For more information, please click here.

HORIZON EUROPE CLUSTER 5

Horizon Europe Cluster 5 – Climate, Energy and Mobility is a key funding source for CCUS-related projects. It supports research and innovation aligned with the EU's climate neutrality goals. In Cluster 5, CCU is usually part of broader "Clean Industrial Deal" or industrial decarbonisation / net-zero technologies topics, rather than stand-alone CCU calls. Draft information for the 2026–2027 Work Programme shows that:

- A large **"Clean Technologies for Climate Action"** topic under the Clean Industrial Deal umbrella explicitly lists "storage, renewable fuels, and CCU" among the clean-tech areas that proposals may address
- Energy-intensive industry topics on industrial processes, heat, or fuels may also accept CCU and CO_2-based fuels/chemicals as valid approaches as long as they deliver substantial greenhouse-gas reductions.

For more information, please click here.

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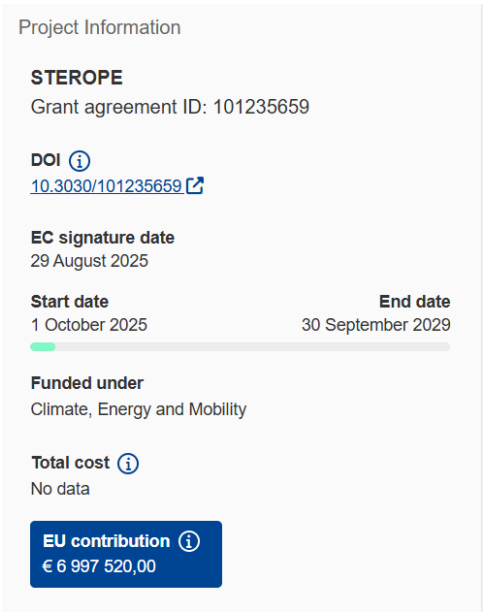
FOCUS ON TWO CCU PROJECTS - HORIZON EUROPE

STEROPE : Synergistic Advanced Carbon Capture Technologies for convERsion of industrially emitted CO2 to sustainable production of biofuels and chEmicals

STEROPE, launched in late 2025, demonstrated integrated CO_2 capture from refinery flue gases followed by electrochemical and catalytic utilisation into sustainable aviation fuel and chemicals, achieving >90% carbon efficiency in pilot tests reported in November 2025. Key advance: Coupling with green hydrogen reduced process energy by 25% versus benchmarks, with lifecycle assessments confirming 80-95% GHG savings.

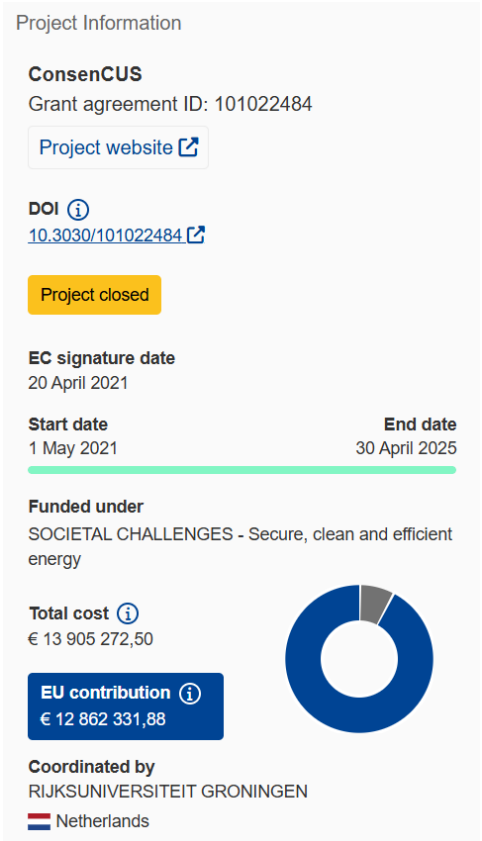
For more information, please click here.



ConsenSUS : CarbON neutral clusters through eectricity-based innovations in capture, utilisation and storage

ConsenCUS advanced electrochemical CO_2 capture and conversion to high-value products like formic acid and ethylene, publishing end-2025 results showing >85% Faradaic efficiency and scalability to TRL 6, with energy use reduced by 40% via optimized electrolyzers. Key advance: Validated integration with industrial flue gases, enabling circular CU for chemicals and confirming economic viability under EU ETS incentives

For more information, please click here.



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CCUS ONGOING PROJECTS - INNOVATION FUND 2025

The main laureates of the 2025 European Innovation Fund include 61 selected projects receiving a total of approximately €2.9 billion to advance net-zero technologies. Several of these projects focus on carbon capture, utilization, and storage (CCUS), contributing nearly half of the EU's Net-Zero Industry Act target of storing 50 million tons of CO2 annually by 2030. With 14 winning projects, France ranks first ahead of Spain (6 projects), Finland, Norway, and Belgium (5 projects each).

For more information on the description of selected projects, please click here.

AirvaultGoCO2 : First large scale CCUS network for deep inland emitters starting from Europe's first zero water intake cement plant

IF2025 Large-scale

Name	Sector	Location	Description
AirvaultGoCO2: First large-scale CCUS network for deep inland emitters starting from the Europe's first zero water intake cement plant	Cement & lime	France	• AirvaultGoCO$_2$ aims to implement Europe's first fully integrated net-zero carbon, zero-water cement plant by introducing carbon capture, utilisation and storage (CCUS) in an inland facility in France to decarbonise cement production. • The project will deliver system-level innovation through decarbonisation across the full value chain. It combines clinker and calcined clay co-production with 100% waste heat recovery and use, carbon capture, use of biomass-based alternative fuels and a closed-loop water-recycling system enabling the first Zero Water Intake plant in Europe. This configuration achieves a significant increase in energy efficiency and reduced emissions, as well as a 95 % capture rate of remaining emissions. • The project offers strong replicability potential, enabling rapid clinker substitution with locally sourced materials and large-scale CCUS integration, serving as a blueprint for decarbonising deep inland industrial clusters.

DEZiR : Decarbonisation Seine Eure Region inside the Rouen industrial hub

IF2025 Large-scale

DEZiR : Decarbonation en Seine-Eure et sur la Zone industrielle de Rouen	Refineries	France	• DEZiR aims to contribute to the decarbonisation of the aviation sector and strengthening of EU energy resilience by establishing one of Europe's first large-scale electric sustainable aviation fuel (e-SAF) production plants. • The project will commercially integrate at a large-scale the various technological elements involved in the e-SAF production process (CO2 capture unit, electrolyser, methanolation, Methanol-to-Jet). The biogenic CO2 will be recovered from biomass boilers. • The project will increase the technology readiness of the e-SAF production process, facilitating the development of similar projects through standardisation and a clear replication approach. It will also contribute to the creation of Europe's low-carbon jet-fuel market, supplying sustainable aviation fuel to major Western European air hubs.

DREAM : Decarbonisation of the Rezzato and Mazzano cement plant

IF2025 Large-scale

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DREAM: Decarbonisation of the Rezzato and Mazzano cement plant	Cement & lime	Italy	• DREAM aims to deliver Italy's first full-scale, full-chain CCS for cement production by deploying hybrid carbon capture technologies. The captured CO2 will be transported via pipeline to a depleted gas reservoir in Italy for permanent storage. • The main innovation of the project lies in the combination of Oxyfuel-advanced cryogenic capture for grey clinker with amine capture for white clinker, interconnected through a cost and energy-efficient waste-heat recovery that powers solvent regeneration without external energy input, processing the captured CO2 into a single high-purity stream enabling efficient pipeline transport. • The project will demonstrate an economically viable CCS business case for inland locations and fostering the regulatory framework for CCS in Italy.

PAST EVENTS IN 2025 AND NEXT EVENTS IN 2026

CARBON CAPTURE GLOBAL SUMMIT 2025

The Carbon Capture Global Summit 2025 was taken place on **September 2-3, 2025** in the QEII Centre of London (UK).

Key details:

- **Focus:** This is the world's leading event for CCUS, driving international collaborations to turbocharge the global CCUS industry and support net-zero targets. The summit emphasizes ambitious scaling, market acceleration, and investment strategies across sectors such as energy, industry, transport, and hydrogen.

- **Participants:** 800+ decision-makers, policymakers, CCUS developers, investors, financiers, industry offtakers, supply chain experts, including representation from Europe, UK, North America, Asia-Pacific, and the Middle East.

- **Agenda:** High-level plenaries, strategic panel discussions, technology showcases, project updates, and policy workshops. Dedicated tracks for market deployment, policy evolution, finance, and partnerships.

- **Notable Speakers:** Sarah Jones MP (UK Minister of State for Energy Security and Net Zero), Kelly Ripley (Shell), Mike Lockett (Uniper), Lars Erik Aamot (Norwegian Ministry of Energy), Martijn Smit (Equinor), Eric Gray (GE Vernova), and many others.

- **Networking:** Major networking events including executive receptions, round table sessions, and matchmaking opportunities.

UKCCSRC KNOWLEDGE EXCHANGE CONFERENCE 2025

The UKCCSRC Knowledge Exchange Conference was on **September 10-11, 2025** in Sheffield, UK.

Key details :

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- **Focus:** A leading knowledge exchange event for UK and European CCUS researchers and industry, designed to foster collaboration and showcase cutting-edge academic and applied research.
- **Participants:** Researchers, academics, industry professionals, policy stakeholders, and project managers.
- **Agenda:** Research presentations, technology demonstrations, policy sessions, workshops, and industry-academia collaboration forums.
- **Notable Speakers:** Renowned researchers from UKCCSRC and invited leaders from industry research divisions.

12TH EUROPEAN CARBON DIOXIDE UTILISATION SUMMIT 2025

The 12th European Carbon Dioxide Utilisation Summit 2025 was hold on **24–25 September 2025** in Antwerp, Belgium, organized by ACI London.

Key Details:

- **Focus**: Advancing carbon capture and utilisation (CCU) technologies to drive the transition to a sustainable, low-carbon economy16.
- **Participants**: Industry leaders, policymakers, innovators, investors, and NGOs.
- **Agenda**: Sessions on scalable strategies, investment opportunities, policy frameworks, and emerging technologies like CO2-to-fuels and renewable polymers.
- **Notable Speakers:** Representatives from CO2 Value Europe, Equinor, European Energy, Port of Antwerp-Bruges, and technology innovators like Oxylum and Spark e-Fuels.
- **Networking:** Emphasis on collaboration in Europe's industrial hub, with participation from companies such as Avantium, a leader in sustainable polymer materials

CARBON CAPTURE TECHNOLOGY WORLD EXPO 2025

The Carbon Capture Technology World Expo 2025 was organised on **October 21-23, 2025** in Hamburg, Germany.

Key details :

- **Focus:** Europe's largest exhibition and conference for CCUS and climate technologies, dedicated to advancing market deployment across industries and enhancing international partnerships and knowledge exchange in carbon removal.
- **Participants:** Major engineering firms, technology manufacturers, energy/construction companies, heavy industries, manufacturers, government and policy bodies, NGOs, and consultants.

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- **Agenda:** Six themed tracks (including hydrogen, ammonia, and carbon removal), live technology demonstrations, research updates, regulatory panels, and a co-located Hydrogen Technology World Expo with a shared pass for deeper cross-industry learning.

- **Notable Speakers:** A broad roster of leading engineers and CCUS sector experts, main-stage thought leaders from throughout Europe's climate industry.

- **Networking:**
  Business matchmaking, product launches, technology showcases, and multi-sector meetups available for all conference participants.

TECHNICAL DAY – CO2 : A COLLECTIVE CHALLENGE – COOPERATING TO CAPTURE AND VALORIZE

AXELERA Event – January 20, 2026
Location: Campus Région du Numérique, Charbonnières-les-Bains, France

- **Focus:**
  A one-day technical and strategic event dedicated to carbon capture and utilization (CCU) as a key lever for industrial decarbonization. The event addressed how cooperation across value chains can accelerate CO_2 capture, conversion, and reuse, particularly for hard-to-abate industrial sectors.

- **Participants:**
  Industrial companies, technology providers, researchers, competitiveness clusters, project developers, public authorities, and regional stakeholders involved in CCU, energy transition, and circular carbon solutions.

- **Agenda:**
  The program combined:
  - Overview sessions on CCU market trends, policy, and regulation
  - Technical presentations on CO_2 capture and valorization technologies
  - Industrial feedback and project case studies
  - Cross-sector discussions on economic viability, public acceptance, and collaboration models
  - Two dedicated panels focused on:
    - Scaling sustainable aviation fuels (SAF) from research to industrial deployment
    - CO_2 valorization from biogas and methanization within a circular carbon economy

- **Notable speakers:**
  Experts from industry, research organizations, and public institutions, including

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representatives involved in national CCUS strategy development, applied research programs, and industrial demonstration projects.

- **Networking:**
  The event provided structured and informal networking opportunities throughout the day, enabling exchanges between industrial players, researchers, and policymakers, and fostering new collaborations within the French and European CCU ecosystem

5TH EUROPEAN CARBON CAPTURE, UTILISATION & STORAGE 2026

The 5th European Carbon Capture, utilization and storage 2026 summit will take place on **January 26-27th 2026 in Amsterdam** (Netherlands).

Key details:

- **Focus:** Europe's premier summit advancing CCUS technologies and industrial decarbonization. Themes include breakthroughs in steel, cement, chemicals, shared CO_2 transport infrastructure, MRV, regulatory alignment, CCUS–hydrogen integration, public acceptance, and skill development.

- **Participants:** Industry leaders, project developers, policymakers, finance experts, technology vendors, and academics.

- **Agenda:** Sector-specific sessions, expert panels, workshops on regulation and finance, hands-on discussions, and real-world project showcases.

- **Notable speakers:** Leading CCUS researchers, government climate officials, and technology innovators.

- **Networking:** Interactive sessions, roundtable forums, and networking receptions connecting industry and policy stakeholders.

CARBON CAPTURE EUROPE 2026

The Carbon Capture Europe 2026 conference will take place on **February 23-24th 2026 in Amsterdam** (Netherlands).

Key details:

- **Focus:**
  Cross-sector CCUS innovation and market deployment. Focus areas include scaling up projects, regulatory updates, financing solutions, and practical pathways for regional collaboration and infrastructure development

- **Participants:**
  Project owners, regulators, finance experts, technology providers, heavy industry representatives.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101037009.

- **Agenda:**
  Keynotes, project showcases, executive dialogues, and workshops on scaling CCUS and market integration.

- **Notable speakers:**
  Expected from leading European CCUS projects and regulatory bodies.

CARBON CAPTURE EUROPE SUMMIT 2026

The Carbon Capture Europe Summit 2026 will take place on **March 11-12, 2026 in Rotterdam** (Netherlands).

Key details:

- **Focus:** Driving ambitious CCUS policy, transport and storage infrastructure, and commercialization of carbon dioxide removal (CDR) across Europe.

- **Participants:** Over 600 senior executives, including government, industry, finance, and port authorities.

- **Agenda:** 80+ executive speakers, sessions on regulatory frameworks, project finance, storage scale-up, real-world case studies, and partnerships.

- **Notable speakers:** Mechthild Wörsdörfer (European Commission, DG Energy), Martijn Smit (VP, CCS & Hydrogen, Equinor), Guy Janssens (Port of Antwerp), and more.

- **Networking:** Matchmaking, networking receptions, and interactive industry showcases.

These events present excellent opportunities for learning, collaboration, and networking, featuring top industry, policy, and academic experts addressing the future of CCUS in Europe.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101037009.

INTERESTING SITES & SOURCES

PYROCO2 Project - https://www.pyroco2.eu/

CO2 Value Europe - https://www.co2value.eu/

CO2 Value Europe database - https://database.co2value.eu/

Club CO2 - https://www.club-co2.fr/fr

International Energy Agency - https://www.iea.org/

Zero Emission Platform - https://zeroemissionsplatform.eu/

Strategy CCUS - https://www.strategyccus.eu/

Global CCS Institute - https://www.globalccsinstitute.com

France Hydrogen - https://www.france-hydrogene.org/

GreenH2Atlantic Project - https://www.greenh2atlantic.com/

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