

Industrial Carbon Management:

Capturing, storing and using CO₂ to reach our climate goals

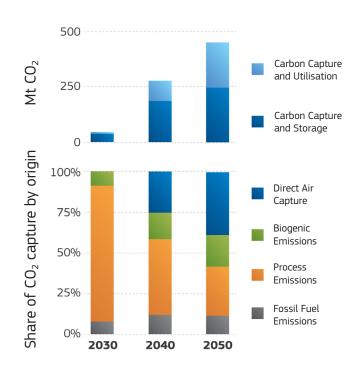


Achieving our ambitious climate targets requires a significant reduction in CO₂ emissions in the coming years. While much of this can be achieved through investing in **energy efficiency** and **renewable energy**, we will also need technologies that can capture and store CO₂, or utilise it. This will be particularly important in sectors where it is the most challenging to reduce emissions, such as cement and waste-to-energy.

To reach the recommended **90%** net emissions reduction by 2040 and climate neutrality by 2050, the EU will need to be ready to capture:

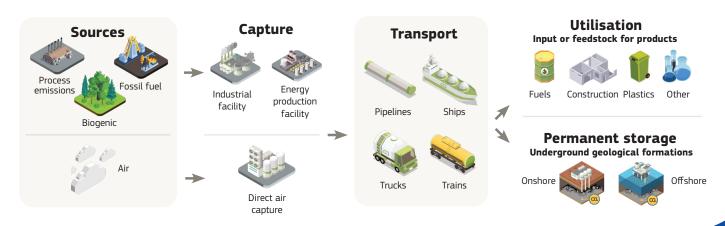
- at least **50 million tonnes** of CO₂ per year by 2030,
- approximately **280 million tonnes** by 2040,
- and around **450 million tonnes** by 2050.

This will also require removing CO₂ from the air.



What is industrial carbon management?

- The **capture of CO₂** from fossil fuel combustion, industrial processes, biogenic emissions, or directly from the air.
- Where the captured CO₂ is not used directly on-site, it is **transported** and either **used** in industrial processes for construction products, synthetic fuels, plastics or other applications, **or permanently stored** in underground geological formations.
- Where permanent storage involves CO₂ captured from biogenic sources or directly from the air, it results in **carbon removals**.



A European approach to industrial carbon management

In order to boost industrial carbon management, the Commission has put forward a strategy to address all parts of the CO_2 value chain – and move towards an EU single market for carbon management. The strategy aims to establish an EU-wide framework and approach to industrial carbon management, so that investment can be better coordinated at EU and national level.

MAIN ACTIONS AND TOOLS TO SET UP AN EU CO2 VALUE CHAIN

Deploying CO2 transport infrastructure



- · Preparation of a regulatory framework, market design and infrastructure planning mechanism
- Establish emissions accounting rules under the EU ETS to enable transport of CO₂
- · Minimum standards for CO2 streams applicable to all industrial carbon management solutions
- Assessment of the potential to **reuse/repurpose existing infrastructure** for CO₂ transport and storage
- Nomination of **European coordinators** to support the early development of infrastructure

Boosting carbon capture and storage



- · Dedicated voluntary demand assessment and demand aggregation platform for linking CO₂ transport and storage providers with emitters
- Investment Atlas of potential CO2 storage sites
- Step-by-step guidance for permitting processes for CCS net-zero strategic projects
- · Develop **sectoral roadmaps** using the knowledge-sharing Platform for industrial CCUS projects

Supporting carbon removals

- Assessment of overall objectives in line with the 2040 climate ambition
- Develop **policy options** for supporting industrial carbon removals
- Boost research and innovation through Horizon Europe and the Innovation Fund



Fostering carbon utilisation

- · Boost **higher uptake of sustainable carbon** as a resource in industrial sectors
- Establish rules for the accounting of all industrial carbon management activities

To further promote investment and funding, the Commission will assess investment needs for carbon management for 2040 and 2050, as well as the maturity of relevant technologies for moving from project-based to market-based funding mechanisms. We will support the Member States in increasing knowledge, awareness and public acceptance among the local communities for these technologies.

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