

Industrial Carbon Management:

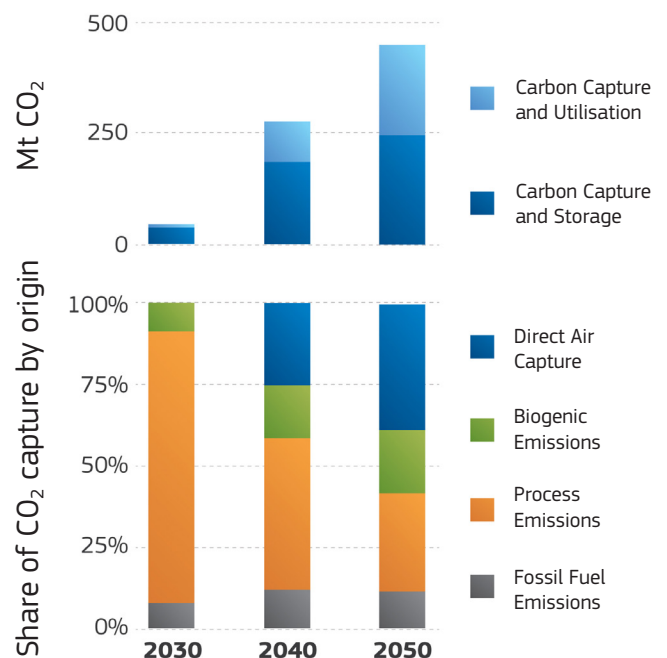
Capturing, storing and using CO₂ to reach our climate goals

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:

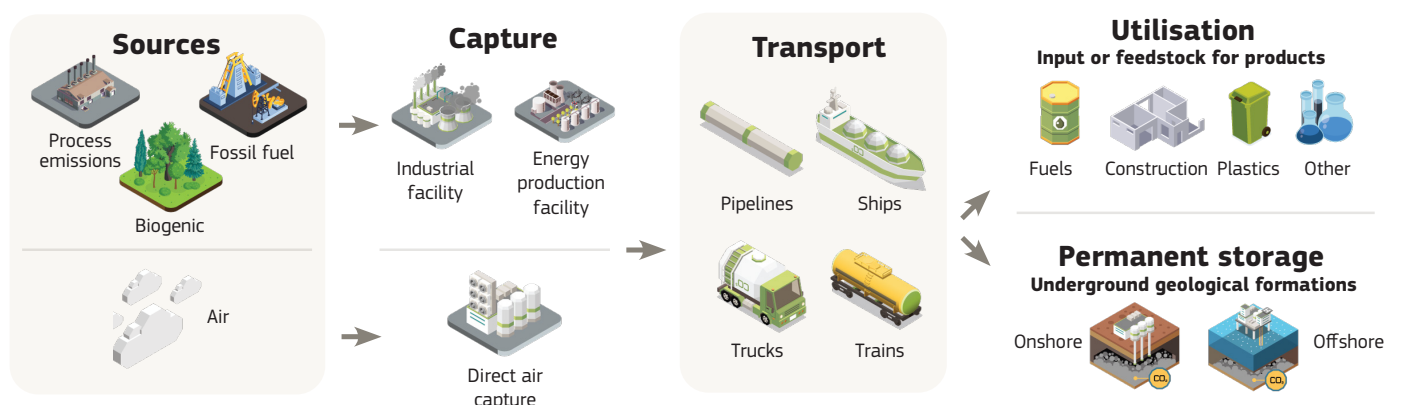
- at least **50 million tonnes** of CO₂ per year by 2030,
- approximately **280 million tonnes** by 2040,
- and around **450 million tonnes** by 2050.

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 CO₂ 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.