

CO₂ transport, the way forward for the chemical industry

The chemical industry and many everyday products depend on carbon molecules. That carbon is and will remain at the very heart of our processes in the chemical sector. On the path towards climate neutrality, industrial carbon management and the EU CO₂ market become ever more important to reduce and remove emissions.

As a follow, up to [our response on the Industrial Carbon Management Strategy](#), Cefic outlines its view to build an effective EU-wide CO₂ market and infrastructure. As a starting point, we recommend applying a technology neutral approach while developing this policy framework. The CO₂ market package should provide a regulatory framework for investors to facilitate the rapid development of a CO₂ backbone in the EU. The chemical industry also supports a better integration of both carbon capture and utilisation and carbon removals into the existing policy framework for enabling emission reductions and improving CO₂ circularity. The opening of this consultation is a step in the right direction.

CO₂ Market foundation

A phased approach for CO₂ transport rules

Carbon capture and storage (CCS) is a promising route for avoiding greenhouse gas emissions. It can also serve as a carbon sink when storing CO₂ from biological origin. As it stands, a lack of a regulatory framework inhibits the development of large-scale CCS deployment and related transport and storage infrastructure. Additionally, the lack of a business and market demand for low-carbon products constraints market development.

Learning from the experience of developing the gas and hydrogen regulatory framework, the CO₂ transport development should follow a phased approach to market rule-setting. As indicated in Cefic's position on Industrial Carbon Management, in a first instance there should be sufficient flexibility from regulations to facilitate market development and allow for investors to recuperate their costs- but with clarity about the rules that would come into effect at the end of such a transitional period.

In practice, coordinated EU level network planning, along with overarching guidelines to facilitate infrastructure development and permitting, should serve as the foundation for introducing market rules for CO₂. In contrast, the adoption of specific tariff structures should be deferred until regulatory bodies and market participants have a more comprehensive understanding of the technical and regulatory requirements that will emerge in this nascent market. Despite this, regulatory clarity is required to support the predictability of investment decisions.

On infrastructure, further effort should focus on establishing connection of storage sites offshore with the captured CO₂ from inland industrial sources. This infrastructure is often cross-border and hence requires an EU-level integrated approach. We further recommend that proposals on CO₂ transport incorporate all relevant transport modes, including pipelines, barges, vehicles, and rail – the latter of which will be particularly important during the early market scale-up.

Develop a phased approach to the development of the CO₂ transport through:

- **The launch of a unified approach for network planning and infrastructure development, including integrated planning with methane and hydrogen networks**, which provides sufficient flexibility to enter the market, and enables spatial and cost optimisation.
- Similar to the methane and hydrogen market rules, **allow for a sufficient maturing of the CO₂ market prior to introducing more prescriptive market rules**, taking into account also the emerging technical needs of this new market.
- **Improve interoperability and cross-border operations** developing better structure connecting industry onshore CO₂ capacity with offshore storage sites.

Harnessing CCU potential

As a general rule the legislative framework should clearly define when emissions are counted and allowances surrendered (manufacturing, use phase, or end-of-life) to avoid double counting and

double pricing. In its recent response to the ETS review, Cefic suggested how to further leverage the CCS into the existing legal framework ensuring sufficient distinction and proper accounting between CCU fuels and CCU materials¹.

Together with CCS, CCU constitutes the backbone for addressing emissions especially residual ones. However further effort is needed for the market uptake of CO₂ based products, which at the moment lack of a business case. Taxation policy together with better transparency may help to keep CO₂ in the circularity loop.

- The future CO₂ market should **recognise CCU benefits, ensure fair emissions accounting, provide incentives for keeping CO₂ in the product loop, and encourage market uptake** through transparency and standards.
- **Delete the phase-out date for fossil CO₂ emissions** for use in renewable fuels of non-biological origin.

Finally, a CO₂ market should include carbon removal solutions. To drive industry investment is essential that removal credits are recognised in enabling policy frameworks like the EU ETS, and that timely mechanisms such as negative emission allowances are established to compensate for unavoidable emissions.

CO₂ Market in practice

Overcome barriers for cross-border transportation of CO₂:

- Regulatory approaches to CO₂ transport should reflect the **multi-modal** nature of future CO₂ value chains, i.e. include all eligible CO₂ transport modalities such as pipeline, ship, rail, vehicle and include intermodal nodes such as terminals and hubs.
- Create a new category of “CO₂ Corridors” **under TEN-E, establishing a dedicated pillar for CO₂ infrastructure**, analogous to the existing “Hydrogen Corridors” category.

¹ [Cefic position on the future of ETS](#) July 2025 makes a distinction between the CCU fuels and CCU materials. Where fossil CO₂ is used to produce synthetic fuels, it should keep an upstream accounting. For CCU materials, where fossil CO₂ is transformed into new materials, revising the concept of “permanently chemically bound” and at the “end-of-life” as in the ETS directive, including the waste sector into the ETS, and addressing hurdles in the Renewable Energy Directive (RED) Delegated Act on RFNBO should be performed.

- Advance **national CO₂ infrastructure development** plans by EU Member States.
- **Integrated planning with methane and hydrogen networks**, through mandatory coordination of CO₂ infrastructure development plans to ensure spatial and cost optimisation.
- Once market players have visibility on their needs, **advance standardisation and harmonisation of CO₂ infrastructure regulations**.
 - Unified technical (e.g. purity and quality requirements) and environmental standards would facilitate infrastructure development, interoperability and compatibility. Naturally, these standards should be developed in close consultation with industry and regulators.
- The European Union should take the lead in **removing barriers and legislative uncertainty related to CO₂ transport and storage** arising from international agreements (such as the London Protocol, Helsinki Convention and Trade and Cooperation Agreement with the UK).
- Develop **administrative and environmental simplification of permitting** through fast-tracking mechanisms and one-stop-shops.

Advance the emergence of a competitive, cost-effective CO₂ value chain:

- **Non-discriminatory third-party access** should be the basis of a competitive CO₂ market. The introduction of third-party access rules may possibly require a transitional period that allows for temporary derogations to allow the market to mature.
 - Infrastructure access should be similarly non-discriminatory for all types of CO₂.
- In the near term, a few major storage hubs and trunklines are likely to dominate the route to storage for most emitters in Europe. Throughout the market-scale up and even when allowing for phased approach to CO₂ regulation, **avoid that prohibitive tariffs stifle market development**.
 - **Protect first-movers**: applying a phased approach to market regulation may mean that first movers sign long-term contracts under a tariff regime that is subject to change as the market regulation matures. Ensure that these changes do not punish first movers.
- In the early market stages, vertical integration may have a role to mobilise investments and accelerate project deployment. While these may have utility during the market scale-up, the CO₂ market package should **provide clarity on the unbundling rules applying at the end of a**

transitional period to foster a competitive CO₂ market that **addresses the risk of natural monopolies and resulting price distortion**.

- **Facilitate infrastructure repurposing**, and ensure independent regulatory oversight.
- **Develop a system of certificates of origin for CO₂** that facilitates cost-efficient market development and avoids double-counting through credible traceability, monitoring and verification.
- **Develop guarantee instruments for high-risk CO₂ infrastructure investments**, especially long-term investments with uncertain return rates, such as Carbon Contracts for Difference (CCfDs), Public-private partnerships (PPPs).
- The regulatory framework should **consider geographically-confined CO₂** networks which may be exempted from third-party access and CO₂ purity standardisation rules, as the utilisation of carbon can have end-user specific purity requirements.

Develop EU-wide planning and de-risking instruments to support early-stage investments:

- A **dedicated match-making platform that would aim to address coordination issues** in the value chain and strengthen the bargaining power of smaller emitters may prove beneficial to market and infrastructure development.
 - A European CO₂ Infrastructure Platform, modelled on the European Hydrogen Backbone could serve as a first iteration of a TYNDP for CO₂ should be prepared to serve as a joint planning platform involving Member States, regulators, industry stakeholders.

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About Cefic

Cefic, the European Chemical Industry Council, is the forum of large, medium and small chemical companies across Europe, accounting for 1.2 million jobs and 13% of world chemicals production.

On behalf of its members, Cefic's experts share industry insights and trends, and offer views and input to the EU agenda. Cefic also provides members with services, like guidance and trainings on regulatory and technical matters,