

CO₂ Transportation Infrastructure and Markets

EIGA members have been capturing, producing, conditioning, transporting and supplying CO₂ for many decades

The sector's extensive expertise is also shared in the form of best practices and industry standards¹. Here are our recommendations for the future regulatory package on CO₂ transportation infrastructure and markets.

The EU's forthcoming framework is set to be built around the core NZIA objective of capturing and storing 50 million tonnes of CO₂ by 2030. The European Industrial Gases Association (EIGA) welcomes this timely initiative. As a leader in the capture of carbon in Europe, the sector has witnessed persisting market failures (high upfront costs, coordination risks, limited incentives, and early mover exposure). However, EIGA warns of the risk of regulating an already existing, functioning merchant CO₂ market. The purpose of this legislative initiative is to build a market that does not exist, the CCS market, and remove hurdles to building the necessary transport and storage infrastructure that enables it.

Establish clear EU level principles now, with room to phase in detailed technical rules later and, where appropriate, allow temporarily flexible application in the ramp up phase—while avoiding lock in of fossil use. Keep the NZIA 2030 injection capacity target central and consider renewing Union level capacity objectives beyond 2030.

¹ https://www.eiga.eu/publications/?_sf_s=co2

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1) Market Design Principles

- **Clarity on scope.** The CO₂ market targeted by this initiative refers to the nascent **CCS market**; Capture and use of CO₂ should not be in scope, as this market already exists and is liquid. With the exception of e-fuels, where we will see a progressive ramp-up of demand for CO₂, existing uses of CO₂ are expected to remain stable or to slightly decrease. For these uses, we do not identify any barriers that would warrant regulation at EU level. That is, CCU should **not** be brought under this regulatory umbrella.
- **Phased rule-making.** Any regulatory initiative should aim at setting **key EU principles now** (cross-border trade, non-discriminatory access, interoperability, transparency, tariff discipline, de-risking), with **more detailed technical rules** added as the market matures.
- **Technological neutrality, CCS-focused.** Legislation should be **technology-neutral** in market design but **explicitly targeted at CCS** and its enabling infrastructure, leaving to markets and complementary instruments (e.g. national subsidies) the choice of determining which decarbonisation option is the most appropriate.

2) Network Planning & Coordination

- **EU-coordinated planning for pipelines** (underpinned by national plans) can provide better visibility on needs and availability, **mitigate coordination risks**, and **accelerate development**.
- **Incorporating non-pipeline modes** (shipping, rail, road) into national and EU-level planning will better **reflect cost efficiency and risk profiles**, and fully assess potential impacts on road, maritime, and inland shipping infrastructure.
- **System integration is key.** Exploring **positive trade-offs** with the planning of other energy vectors and solutions (e.g., capture power demand; LNG cold energy for liquefaction; reuse of redundant energy assets; hydrogen-linked capture) and working with integrated scenarios can lower system costs.

3) Permitting: Predictable, Efficient, Durable

- **Improve implementation of existing frameworks.** TEN-E, NZIA, EIA, and ETS permitting provisions form a workable base. There are opportunities to **improve effectiveness**, for instance via:
 - **digitalisation**
 - a basic, permanent permitting track (not expiring with NZIA in 2030)
 - single points of contact (or coordinated SPC)
 - **maximum timelines** and **adequate resourcing** at national level
 - and **open environmental/geological data** sharing.

These provisions (and particularly the SPCs) should also cover **conditioning facilities** and **temporary/intermediate storage**.

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4) Cross-Border Transport & International Alignment

- **Removing legal barriers and uncertainty** arising from international marine conventions and reporting (London Protocol) should be a priority. However, **alignment should always never be done at the expense of safety**. For this reason, third-country interconnections should only be allowed with countries with **equivalent CO₂ safety regulation**.
- **Leakage rules**. EIGA favours a **harmonised EU framework** for cross-border leakage liability and reporting, with ETS incentives already discouraging leaks. EU legislation should also consider **emergency response rules** for pipelines and other transport modes, set at **EU level** or **EU principles with national implementation**.

5) CO₂ Quality: Standards & Interoperability

- **Minimum EU standards**. EIGA supports CEN's work on **minimum CO₂ quality standards** to **avoid fragmentation**, enable **interoperability** across borders and modes, provide clarity to emitters, and protect **infrastructure**. Specifications should be **consistent along regulated CCS-dedicated networks**.
- **Drivers & responsibilities**. Responsibilities of the infrastructure operators should focus on **corrosion avoidance, interoperability, cost control, and equipment scale-up**. **Infrastructure users** are and should remain responsible for the specifications of what they inject.
- **Transparency**. **Specifications should be made publicly available**; underlying research should be accessible to standardisation bodies and, where feasible, the public to build trust.
- **Eliminate cross-border barriers**. EU legislation should formalise **cross-border operator cooperation** and **regulatory authority coordination**. This can include agreeing on **interconnection-point specifications** and providing **cost-sharing rules** to ensure uninterrupted cross-border flow.

6) Access Conditions, Tariffs & Anti-Discrimination

- **Non-discriminatory access to storage as the core principle**. Given **high entry barriers** and **scarcity in many regions**, requiring **open seasons** and **cost-reflective tariffs** is essential. Capacity-management rules, and **anti-cross-subsidy** measures for storage markets could be envisaged. As always, **safety** should be paramount in all storage regulation, and specifically in access conditions.
- **Open access to transport pipelines**. EIGA favours **non-discriminatory access** via a **negotiated** system of tariffs and **open seasons**, with harmonised EU rules to avoid **capacity hoarding, cross-subsidies**, and **lock-in** from bundled transport-storage offers. These access rules can be extended to **terminals and ancillary installations required for entry/exit to the CCS network**. However, infrastructure solely dedicated to merchant markets ought to remain outside the scope of regulation.
- **Unbundling and governance**. Where vertical integration of CCS value chains creates risks, legislation should require **separate legal entities for network activities, appropriate unbundling**, and **structural safeguards** to prevent discrimination from the outset. Competition law alone is insufficient for trust and investment.

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7) Repurposing & Reuse of Energy Assets

- **Selective reuse.** Repurposing pipelines, terminals, jetties, loading arms, utilities, and ships can lower costs and time, but **technical and safety concerns must be assessed and addressed** (materials compatibility, phase conditions, corrosion, monitoring). It is essential to clarify the **legal status of land rights, easements, and permits** when assets switch from gas to CO₂. Most CO₂ infrastructure will still need to be **purpose-built**.

8) De-Risking & Financing

- **Early phase support.** The EU should foresee **financial and nonfinancial derisking** during the **ramp-up (to 2040)** for pipelines, nonpipelined transport, and terminals, reflecting uncertainties in capture volumes, synchronisation with storage readiness, and technology costs.
- **Risk mitigation tools.** The EU can consider setting up:
 - **Transparency platforms** to improve visibility of supply/demand, coordinate FIDs, aggregate SME volumes, synchronise capacity allocation, and enable **primary/secondary capacity trading**.
 - **Tariff instruments** such as **intertemporal cost allocation** to lower initial tariffs for first users of the network, and **State guarantees** against **volume risks**.
- **Who to support.** Direct support should not only support the infrastructure developers, but also target the **first infrastructure users**.

9) Biogenic CO₂ removals: Certification & Traceability

- **Certification.** EIGA supports an EU-recognised voluntary certification approach (akin to biomass or RFNBOs) based on a common methodology **only where EU law mandates the use of biogenic CO₂ such as biogenic carbon removal accounting or RED sustainability criteria** (e.g., RFNBOs).
- **Traceability.** For mixed flows (fossil/biogenic/atmospheric), favour a **harmonised mass-balance approach across the network and pathways** to ensure robust accounting.

What Success Looks Like

- A **credible, investable CCS market** with **EU-wide interoperability, non-discriminatory access cost-reflective tariffs, and transparent capacity signals**.
- **Efficient cross-border movement** under **clear international and EU rules**, with **defined emergency and leakage responsibilities** and **quality standards** that protect assets, the environment and ensure safety.
- **Pragmatic support** until at least 2040 to overcome early movers' risks, enabling private capital to take the lead thereafter.

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About the European Industrial Gases Association

Founded in 1923, the European Industrial Gases Association (EIGA) is a safety and technically oriented organisation representing the vast majority of European and also non-European companies producing and distributing industrial, medical and food gases. The member companies closely co-operate in technical and safety matters to achieve the highest level of safety and environmental care in the handling of gases. EIGA is in frequent touch with Standardisation and Regulatory Organisations and Authorities as well as trade and industrial organisations. EIGA's membership comprises European companies that produce or distribute industrial and/or medical gases. As such, EIGA itself does not produce or market industrial or medical gases.

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