European Parliament's own-initiative report on industrial carbon management

Key priorities identified by the Zero Emissions Platform (ZEP):

1. **Provide a regulatory framework for CO2 transport** that reduces risks, streamlines permitting procedures, and sets enabling standards for CO2 specifications in Europe.

2. **Advance a market for low-carbon industrial products and services** which can be produced through industrial carbon management.

3. **Ensure sufficient access to CO2 transport and storage infrastructure** for industries across Europe, paying regard to the needs of geographic balance.

4. **Create an industrial carbon management alliance** that brings industry together across the value chain, to provide insights, articulate needs and identify barriers.

5. **Provide sufficient financial support mechanisms** that value carbon at a price that enables a strong and sustainable business case.

Context

Industrial carbon management (ICM) is essential to achieve net zero and a Just Transition, especially for the industrial and power sectors in Europe. The deployment of carbon capture, removal, use and storage projects are uniquely able to safeguard tens of thousands of jobs that depend on these industries being retained in Europe.

A strong carbon price is needed to support a low-carbon market and, beyond the emissions trading system (ETS), financial mechanisms and sufficient demand for low carbon products and services are needed to support an efficient and sustainable business model. Planning and guidance for a net zero CO_2 network are also needed to connect deep decarbonisation to storage resources.

This information brief provides an overview of the key issues which need to be addressed in order to scale up industrial carbon management to ensure Europe remains competitive and meets our climate ambitions to reach climate neutrality by 2050.

Key priorities for an INI on industrial carbon management

1 **Provide a regulatory framework for CO_2 transport** that addresses the need to reduce risks to providers, streamlines permitting procedures to facilitate the development and deployment of CCS and CCU projects, and sets common standards for CO_2 specifications in Europe.

Detailed points:

- **Level playing field**: Ensuring fair rules and regulations is essential to create a level-playing field for CO2 transport in Europe, which is critical to providing sufficient investment to construct infrastructure.

- **A more comprehensive legal framework**: The CCS Directive provides rules for third party access. However, these rules are insufficient to guarantee open access and non-discriminatory access to critical CO_2 infrastructure, such as pipelines, buffer storage and terminals. This can lead to market failures emerging due to the absence of rules to guarantee transparency. The CCS Directive should therefore be complemented by a legal framework for CO2 transport.

  Importantly, legal frameworks for natural gas and hydrogen already exist at the EU level. While these could provide some helpful analogues, it is essential that the techno-economic realities of CO_2 are reflected in in the framework and the differences with respect to H_2 and CH_4 as gases.

- **Transparency on standards**: Technical standards, for instance concerning CO_2 purity levels, should be harmonised where possible. Such consistency can help to reduce technical, operational, and liability risks, create clarity around responsibilities, and help avoid operational errors. Currently, information is fragmented, and cooperation and transparency need to improve across projects. An Expert Group to address these issues could provide a useful forum to address these issues and aid with transparency. This could help foster accountability and build trust, making private players more willing to commit long-term investments and scale up CCS deployment.

- **Addressing legal barriers prohibiting projects**: The European Commission should actively engage with and facilitate an agreement among Member States to address existing legal barriers, such as the Helsinki Convention to clarify its legal framework and permit CO2 storage in the Baltic Sea to enable the deployment of critical CO2 storage infrastructure in the region.

- **External co-operation outside the EU and EEA**: Under the current framework of the EU Emissions Trading System (ETS) and the CCS Directive, storage of captured CO_2 outside the European Economic Area (EEA) is not recognised. This means emitters which capture and store CO_2 outside the EEA must still surrender ETS allowances.

  As part of the legal framework, the Commission should seek to address this issue, which may be addressed through bilateral agreements between the EU and third countries. For example, to address the issues between the EU and UK through a supplementing agreement under the Trade and Cooperation Agreement (TCA).

2 **Advance a market for low-carbon industrial products and services** which can be produced through industrial carbon management.

Detailed points:

- **Low Carbon Products and Services Strategy:** A dedicated strategy to promote the demand for low carbon products and services is necessary to adequately support producers of low carbon materials (e.g. fertilisers, cement) and service providers (e.g. waste-to-energy providers) who deliver these with a significantly reduced carbon footprint. Demand for such products could be supported via a set of market pull measures, incentives and certification standards, which should be tailored for the main hard to abate industry sectors and their value chains. In this way, the Strategy would seek to create a business case for competitive industrial decarbonisation whilst closing the current price gap of low carbon products and services compared to conventional alternatives. The European Commission should detail such Strategy as part of the Green Lead markets Initiative.

- Announce and establish **science-based methodologies** for low-carbon products to accurately account for their embodied carbon based on their whole life-cycle.

- **Mandatory sustainability criteria in EU procurement rules:** Mandating sustainability criteria in EU procurement rules (e.g. the public procurement Directive) could ensure sufficient demand is available and government leads on scaling up lead markets for low carbon products and services.

- **Advancing a low carbon buyer's alliance**: The Commission could support the establishment of private buyers' alliances of European companies, similar to the First Mover's Coalition, to quickly scale demand for green basic materials.

- **Incentivising critical points in the value chain**: Value chains in each industrial sector are diverse with many key differences. The Commission should assess and establish incentives upstream producers of low-carbon products and/or downstream users of low-carbon end-products to ensure demand is unlocked for low carbon products and services.

3 **Ensure provision of sufficient access to CO_2 transport and storage** infrastructure for industries across Europe, paying regard to the needs of geographic balance.

Detailed points:

- **Efficient network planning**: To ensure an efficient CO_2 system (e.g. no parallel pipelines) can be provided in the long term, a legal framework could envisage designated CO_2 Transmission System Operator's in EU Member States (TSO) to build, (co-)own and operate the CO_2 transmission network.

- **Oversizing trunk network for pipeline access** and nodal offtake for trucks and trains: to ensure flexibility and scalability in CO_2 transport infrastructure. This approach will facilitate future increases in CO2 volumes and reduce the need for costly retrofits as demand grows.

- **Fast-track, harmonised permitting**: Strategically important "backbone" CO_2 infrastructure projects should receive fast-track permitting to ensure that critical infrastructure receives accelerated approval. Cross-border permitting requirements should also be harmonised to avoid delays in constructing cross-border CO_2 infrastructure projects, in particular.

- **Proactive stakeholder engagement**: Promoting the inclusion and engagement of local communities, local and/or regional authorities, industries and workers in co-creation of governance rules for CO_2 infrastructure could lead to greater public support, particularly in areas where infrastructure projects will be sited.

4 **Support an EU industrial carbon management alliance**, bringing together key industry players across the value chain.

Detailed points:

- **Objectives of the Alliance**: The objective of the alliance would be to facilitate and accelerate the development, demonstration, and deployment of industrial carbon management in Europe. This could be done by:
    - **Identifying barriers, opportunities, and investment needs** to build up capture technology and transport & storage capacity in the EU.
    - Developing an innovative, competitive, and sustainable **industrial carbon management value chain** in Europe
    - Retain the EU as a global centre for **innovation and competitiveness** in this sector
    - Bolster Europe's **resilience and strategic autonomy** in critical industrial sectors
    - Support the creation and retention of **skilled jobs** in the EU
    - Working together towards a **common and ambitious EU target for CCS**
    - Developing a **Strategic Action Plan** setting out a comprehensive framework of regulatory and non-regulatory measures to support all segment of the industrial carbon management value chain, and built around key priorities

This could be done by, for example:

- **Organising annual ministerial meetings:** The Alliance could organise high-level ministerial meetings in Brussels between relevant ministers and Commissioners to outline the key issues related to industrial carbon management deployment.

- **Connect Commissioners with high-level stakeholders**: The Alliance could also organise an annual meeting with relevant Commissioners and C-Level representatives from stakeholders across the industrial carbon management community to provide input on the political priorities of the Commission.

5 **Provide sufficient financial support mechanisms**, including grants, subsidies, and tax incentives, to ensure greater infrastructure buildout and create a business case for private sector investment.

Detailed points

- **Expansion and reform of funding mechanisms:** EU funds will be necessary to kick-start the investment, until economies of scale and resilient systems are achieved (to ensure a level-playing field among technologies). In order to ensure greater infrastructure buildout, existing EU funds should be expanded – such as Connecting Europe Facilities (CEF), the Innovation Fund, the Just Transition Fund, the Recovery and Resilience Facility (RRF), and Horizon Europe – or reformed to ensure sufficient incentives are available to develop CO2 infrastructure in remote or landlocked areas where emitters are in far proximity from industrial hubs or ports. This could come via tailored funding (e.g., through the Just Transition Mechanism and the Cohesion Fund). Funding conditions by the EU and member states could also be amended to de-risk initial oversizing of CO2 transport infrastructure considering not only actual expressed interest but also future demand for CO2 transport by emitters.

- **Support for first-of-a-kind projects:** Developing first-of-a-kind (FOAK) projects in any sector requires special attention to de-risk investments. Given the nature of industrial carbon management, particularly with different entities and industries operating across the value chain, advancing FOAK projects to final investment decision can be more challenging than other, more established industries. Addressing the cross-chain risks between capture, transport and storage especially requires attention in current funding mechanisms at the EU level to adequately address the challenges in co-ordination commencement of different parts of CO_2 value chains as well as operational issues which are likely to occur, particularly in the first years of projects. This support could come in the form of dedicated insurance pools and guarantees to ensure FOAK and early-stage projects can advance to deployment stage.

- **Enable private sector investment**: Enabling private sector investment is a key element of ensuring a long-term sustainable business model can be made for industrial carbon management to exist without government subsidies. In this regard, the EU should pay special attention to the issues faced by investors, lenders and insurers to ensure private sector capital can be diverted to industrial carbon management projects in the near future.