

EU Industrial Carbon Management Strategy in view of 2040

Climate Target

06 February 2024

The European Federation of Engineering Consultancy Associations (EFCA) has member associations in 27 countries, representing more than 10,000 companies from the European engineering consultancy industry and related fields. Based in Brussels, EFCA is committed to facilitating constructive dialogue with European Institutions on issues impacting our industry; and engaging with international stakeholders on shared interests.

EFCA's statement in brief

- 1. EFCA supports the EU's ambitious 2040 climate target, which aims for a 90% net greenhouse gas (GHG) emissions reduction compared to 1990 levels. Recognising the urgent need to safeguard our planet and preserve people's livelihoods, EFCA emphasises the critical importance of pursuing an unwavering climate agenda.*
- 2. Maintaining momentum on the green agenda is crucial. Any regression in environmental commitments would jeopardise existing business models built around sustainability principles.*
- 3. Investments in infrastructure need to be prioritised. Neglecting infrastructure maintenance and development in the long term poses significant risks and could undermine sustainability efforts.*
- 4. Carbon Capture and Utilisation/Storage (CCU/S) is a fundamental component of realising the EU's climate targets. Recognising the pivotal role of CCU/S technologies, EFCA advocates for robust support and integration of these solutions within climate strategies.*
- 5. Enhanced research and development into alternative construction materials is essential to alleviate dependency risks and sustain the EU's industry amid material shortages and price hikes, critical for advancing decarbonisation efforts.*

EFCA assumes a pivotal role as a key stakeholder in shaping and implementing the European Union's climate targets. Representing the engineering community, which will design and deliver the necessary infrastructure to facilitate the transition towards a sustainable and resilient future.

Upholding ambitious climate goals for sustainable development and economic resilience

As highlighted in the European Union's communication on the 2040 Climate Target, the ongoing assessments and adjustments of the National Energy and Climate Plans (NECPs) emphasise the necessity for heightened ambition and adjustments to meet our climate targets. EFCA underscores the crucial significance of upholding ambitious climate objectives, which are essential for facilitating the transition towards climate neutrality and fostering a sustainable, competitive economy resilient to climate hazards, geopolitical risks, and critical dependencies. Such high climate ambitions are not only vital for addressing the immediate climate crisis but also for safeguarding the interests of future generations and ensuring the preservation of people's livelihoods. The costs of inaction are substantial, potentially resulting in devastating extreme weather events with severe consequences for our society, ecosystems, and economy. Consequently, any regression on climate policies could have devastating consequences, potentially disrupting businesses that have strategically aligned their operations with decarbonisation and climate neutrality objectives. Ensuring long-term predictability and planning for businesses through investments and sound policy frameworks becomes paramount in this context. Therefore, EFCA urges the EU institutions to uphold their ambitious climate agenda and take decisive actions to ensure the realisation of the 90% emissions reduction target by 2040.

The crucial role of infrastructure in achieving climate goals

In light of the imperative to maintain high climate ambitions, attention must also be directed towards infrastructure development. Robust and sustainable infrastructure is foundational to achieving climate targets and ensuring resilience against climate hazards. EFCA emphasises the critical role of infrastructure in facilitating the transition to a low-carbon economy and enabling the uptake of renewable energy sources. Investments in resilient infrastructure not only contribute to emissions reductions but also enhance societal well-being and economic competitiveness. Therefore, EFCA advocates for prioritising infrastructure projects that support decarbonisation efforts and promote climate resilience across various sectors, including transportation, energy, and urban development.

Neglecting infrastructure now will inevitably lead to exacerbated challenges in the long run. EFCA has emphasised this as a priority in its manifesto for the EU elections, advocating for immediate investment in and enhancement of energy infrastructure. This entails significant improvements in maintenance, sustainable investment, and decarbonisation efforts, all of which require the expertise of the consulting engineering sector. EFCA advocates for leveraging industry expert groups to facilitate dialogue between the sector and EU policymakers, enabling agile solutions and effective policy development. It is imperative to recognise that achieving climate goals is contingent upon robust and resilient infrastructure.

Role of CCU/S technologies in achieving climate neutrality

The EU's communication on the EU Climate Target 2040 underscores the significance of Carbon Capture and Utilisation/Storage (CCU/S) technologies in achieving net zero emissions

by 2050 and transitioning towards absolute negative emissions thereafter. EFCA recognises CCU/S as an integral component in the pursuit of climate neutrality. CCU/S offers a viable pathway to meet climate targets within the designated time frame. However, EFCA emphasises the importance of prioritising green carbon capture practices. The primary objective remains the reduction of emissions, with carbon capture serving as a complementary measure for emissions that cannot be entirely abated. Engineers play a crucial role in designing and implementing the infrastructure required for the transportation of captured carbon. Despite the promising potential of CCU/S, its current implementation remains limited, with only a few pilot projects underway across the EU. EFCA advocates for increased investment in CCU/S technologies to scale up deployment and maximise its effectiveness in mitigating emissions.

To expedite the deployment of CCU/S technologies, we strongly urge policymakers to implement a robust EU Clean Industrial Carbon Management Strategy with the following key considerations:

- **Carbon Molecule Uniformity:** Recognise the identical nature of carbon molecules, irrespective of their origin—be it fossil or biogenic. The economic viability of a) carbon capture, b) transport, and c) storage/utilisation significantly depends on emission source characteristics and distances to storage or utilisation sites. Optimal storage or utilisation locations may not always align with emission sources, making it cost-effective to consider swapping biogenic carbon with fossil carbon. This strategy can effectively minimise CO₂ transport, especially in regions like Northern Europe, where cost-effective carbon capture and storage (CCS) for biogenic CO₂ is feasible. Additionally, in regions like Southern Europe or Northern Africa, where cost-effective hydrogen production is possible, permitting such swaps can lead to the efficient production of Renewable Fuel-Natural Based Organic (RFNBO), offering substantial benefits for hard-to-abate sectors.
- **Timely Development of CO₂ Pipeline Backbone:** The timeline for establishing the European CO₂ pipeline backbone is critical and should be pursued with utmost ambition. Currently, the economic feasibility of developing CCS, and often CCU as well, hinges on proximity to coastal areas. Long-distance transport by truck is only viable for relatively short distances. Without a comprehensive CO₂ pipeline network, landlocked CO₂ point sources and related industries are at a considerable disadvantage and may face obstacles in their development.
- **Integrated Approach to CO₂ Transport Infrastructure:** The communication on the EU's Industrial Carbon Management Strategy rightly identifies various modes of CO₂ transport infrastructure, including pipelines, ships, road, and rail. It is imperative to adopt a comprehensive and integrated approach to the transportation of low-emission products crucial for the green transition. Initiatives related to CO₂ infrastructure must be considered in conjunction with the European Hydrogen Network, as well as the transport of e-methanol and green ammonia. Moreover, while ports and terminals are not explicitly mentioned in the communication as part of CO₂ transport infrastructure, they deserve special consideration. Substantial development and investment in port/terminal infrastructure are prerequisites for a well-functioning CO₂ transport network and are equally crucial for the transportation of other green fuels.

Addressing the dependency on Critical Raw Materials

The decarbonisation of the EU's industry critically relies on the availability and accessibility of critical raw materials. However, this dependency places the EU in a vulnerable position. Presently, we witness how conflicts beyond Europe's borders impact the availability of construction materials like cement and ceramics within Europe. This not only leads to material shortages but also results in price hikes.

Ultimately, such shortages and price increases could escalate the costs of green transitions, such as energy-efficient renovations and green infrastructure, posing challenges for EU citizens. EFCA advocates for increased research and development in alternative construction materials that could eventually supplement some of the critical raw materials, thereby mitigating the risks associated with dependency.

Conclusion

In summary, EFCA underscores the urgency of maintaining ambitious climate goals to drive sustainable development and economic resilience. Prioritising infrastructure investments, advancing Carbon Capture and Utilisation/Storage (CCU/S) technologies, and mitigating dependency on Critical Raw Materials are crucial steps towards achieving these goals. EFCA urges EU institutions to uphold their ambitious climate agenda and take decisive actions to ensure a sustainable and resilient future for Europe.
