

Industrial carbon management – carbon capture, utilisation and storage deployment

ECGA Position and Call for Action

The European Carbon and Graphite Association (ECGA)¹ welcomes the Commission's initiative and acknowledges the importance of the EU industrial carbon management strategy as a necessary step in achieving the 2030, 2040 and 2050 climate targets.

As an emission intensive and hard-to-abate sector, we fully understand the role of Carbon Capture, Storage and Use (CCS/U) as a critical pillar complementing the increase of renewable energy sources and overall emissions reductions.

For our industry, the key challenges with respect to CCU/s include the following:

- **Logistics:** Despite all the continuous measures and investments, our sector has not yet reached the necessary level of expertise or ability to develop our own CO₂ infrastructure and storage. In this context, to be cost-effective, we believe that CCU/S grids and storage need to be shared assets, built by infrastructure companies to serve multiple customers. Such an approach will enable the emergence of a cost-effective grid used by multiple companies and ensuring economies of scale.
- **Timeline:** The timelines for building such infrastructure are long and the 2030, 2040 and 2050 climate change targets require a more concentrate, joint effort, and support additional to the current deployed technologies.
- **Cost:** The costs associated with construction and operation of CCUS, including capturing, transporting, and storing CO₂, make widespread adoption economically challenging. It will at least double our industry's current operational costs.
- **Energy prices/intensity:** CCUS requires significant quantities of electricity. CCUS will more than double or triple the kWh per tonne currently used by our production processes. To comply with all additional targets imposed by ETS, the Energy Efficiency Directive, etc we will require abundant low-cost renewable energy, which is currently unavailable, until well beyond the current decade, with the IEA predicting Europe will fall short of its own 2030 targets for renewable energy.

Given all the above, ECGA calls upon the EU Commission to take all necessary measures and ensure that the future EU Carbon Management Strategy will:

- Set up the basis of a coherent, environmental, socio-economic, and feasible EU carbon management strategy, taking into consideration the deployment of all CCU and CCS technologies and allowing the implementation of most efficient measures to reduce greenhouse gas emissions while ensuring that long-time goals the future and international competitiveness of the industry is not undermined;
- Ensure that neither CCU nor CCS will be prioritized over each other, but technological neutrality be applied. With a robust and effective monitoring and reporting scheme in place and with proper

¹ The European Carbon and Graphite Association (ECGA)¹ is the sole representative association of EU carbon and graphite producers - including the EU based graphite electrode producers going into Europe's steel and foundry industry, electrodes and cathodes for the aluminium and ferroalloy industry, as well as a wide variety of specialty graphite and carbon products for applications ranging from electric motors to modern battery technology.

recognition in the EU-ETS, both technology groups will effectively keep greenhouse gases from being emitted into the atmosphere.

- Ensure an effective carbon management with the associated infrastructures, rules, incentives, business models and cooperation networks. Consider ETS free allowances, CBAMs and competing incentives (e.g. tax breaks) in other regions to ensure a level playing field for incentivising CCS investments through negotiated business models providing industry with acceptable returns. Where possible, align ETS, CBAM and business model considerations with mechanisms in other jurisdictions to ensure a fair competitive landscape for investors. A clear objective should be to avoid unnecessary and inefficient off-shoring of GHG emissions.
- Support carbon management technologies, from both a regulatory and financial point of view for the implementation of these technologies and the necessary cooperations among companies. The corresponding legislation must be designed to be unambiguous and permanently reliable as a prerequisite for social trust and entrepreneurial planning security.
- Ensure that both the necessary funding and risk-sharing mechanisms are available to ensure the development and deployment of CCU/S technologies in time to meet industrial and climate needs. Whilst the network can be expected to be fully self-financing in the medium term, some financial support and guarantees will be needed in the early stages of the grid development.
- Establish a predictable and transparent regulatory framework for the EU's future CO₂ transport infrastructure through new legislation based on the approach for hydrogen, but in a manner that considers the specific nature of CCU/S, promotes investment, and ensures third-party access and technical harmonisation where needed.
- Ensure, where available and possible, a positive climate impact and support for the conversion of CO₂ into products and materials. It is important to note that carbon can also be captured before combustion in a solid form of carbon nanotubes (or other carbon allotropes), which can then be further used in different applications from batteries and electronics to concrete and soil improvement and eventually also stored. This can be done for example via methane pyrolysis, where (bio)methane is decomposed into hydrogen and solid carbon. In a solid form, carbon is easier to handle, there is no need for additional infrastructure and can be used to replace conventional ways of making carbon. Therefore, this initiative should also include solid carbon.
