

Mandate for the WG on CO2 standards

2024

In 2023, the CCUS Forum Expert Group on CO2 Specifications drafted the report on [An Interoperable CO2 Transport Network – Towards Specifications for the Transport of Impure CO2 \(2\).pdf](#), underlining, amongst others, the need to develop minimum CO₂ quality standards that would underpin a multimodal European transport network. The recommendations informed Commission's Communication on the Industrial Carbon Management Strategy (the Strategy) adopted on 6 February 2024.

The priority of the WG for 2024 will be to support the implementation of the Strategy by drawing upon key action points. The WG should seek to complement the ongoing European standardisation work streams, addressing issues such as CO₂ composition, purity, pressure and temperature as well common guidelines regarding 'incidental associated substances from the source, capture or injection process' that will support a competitive, integrated EU-wide CO₂ market by striking a balance between safety, reliability, cost effectiveness and risks across the CO₂ value chain.

The following work streams will be sought by the WG in achieving the above-mentioned objective:

- identification of future needs for the development of European standards and/or other standardisation deliverables alongside the CCUS value chain. To this end, a gap analysis should be carried out to identify market needs and shortcomings in the existing standardisation framework. The WG should summarise the challenges and opportunities of setting minimum quality standards for CO₂ multimodal cross-border transport network that preserve the cost-effectiveness, integrity and interoperability of infrastructure without being overly restrictive and ensuring flexibility;
- a project-approach mapping of CO₂ specifications in USA and UK and potential recommendations which might be pertinent in an EEA approach (e.g. policy choices as regards emission sources);
- in collaboration with the WG on CO₂ infrastructure established under the ICM Forum, the WG should carry out a cost optimal analysis of possible network planning scenarios involving different CO₂ phases which guarantee an indiscriminate, open, third-party access of pipelines and non-pipeline transport modes. The analysis should only focus on scenarios with limited phase conversions for economic and energy efficiency reasons. Furthermore, it should assess potential network impact of CO₂ streams treatment facilities, as well as any other necessary processing equipment at intersections between modes involving phase changes. The WG should seek to recommend cost optimal locations for purification facilities from a system perspective. Furthermore, the WG should advise on an economically rational approaches of attributing costs for CO₂ purification needs deriving from transport mode changes (e.g. purity requirements of non-pipeline transport modes such as shipping);
- a brief analysis of CO₂ standard needs and deriving costs in a progressive network development process (e.g. ramp up phase vs extended network development) considering elements such as cost alignment of specifications for new connections at different phases of the network development and potential trade-offs, such as (dis)incentives to connect to the network.