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Track 2 CO₂-based products

It is useful to categorize CO₂-based products based on their lifetime to better understand and quantify their climate-related role. To that extent, we have introduced a two-track system that places CO₂-based products into Track 1 and Track 2 products. Track 1 products are those with a lifetime longer than 100 years, while Track 2 products have shorter lifetimes. As such, one can consider Track 1 products to take the role of CO₂ removal while Track 2 products help to create a circular carbon economy.

The largest opportunities for large scale and rapid deployment for Track 2 CCU products are jet fuel and methanol. This presentation describes market projections, CO₂ utilization potential, and recommended critical actions to accelerate the deployment of production capacity between 2025 and 2050. A scenario analysis using a range of market assumptions will show the dependence on, e.g., a price on carbon. It is also emphasized that integrated life cycle assessment and techno-economic assessment must guide research, development, and deployment of any new technology. A summary outlook on opportunities for other chemicals will conclude this contribution.