

## E-fuels from DAC and green hydrogen at industrial scale

Clean energies are key to enable the decarbonisation of transportation fuels. Drop-in alternative fuels represent a major opportunity to reduce today's transportation carbon emissions and synthetic fuels are amongst these promising options. Also called power-to-liquid (PtL) or e-fuels, synthetic fuels are often considered a sustainable option in the long term, due to their low lifecycle emissions and other environmental impacts. By sourcing carbon directly from the air, there is no feedstock limitation and the e-fuels achieve true well to wing lifecycle carbon savings without resulting in further carbon movement from the geosphere to the atmosphere. Initiatives have multiplied in recent years, however they still represent a niche fuel type and major challenges need to be overcome in order to ensure their large scale development and deployment. These challenges include renewables energy production scaled-up, cost competitiveness and infrastructure widespread support.

Amy Ruddock is Vice President Europe at Carbon Engineering Ltd. (CE), a Canadian-based clean energy company. CE is leading the commercialisation of ground-breaking technology that captures carbon dioxide directly from the atmosphere at megatonne scale, and a second technology that synthesises it into clean, affordable transportation fuels with partners in green hydrogen, electrolysis and fuel synthesis.