

Response to the European Commission Call for Evidence to Inform the Sustainable Transport Investment Plan (STIP)

About NEG8 Carbon

NEG8 Carbon develops Direct Air Capture (DAC) technology to remove CO₂ from the atmosphere to reach net-zero emissions and to fight climate change. A spin-out from research conducted at Trinity College Dublin and University College Dublin, the company is now based in Waterford, Ireland. NEG8 collaborates with project developers, offering affordable, scalable DAC solutions that can capture thousands of tonnes of CO₂ annually.

NEG8 wish to evidence their willingness to adopt and participate in projects for the production of e-SAFs. We also wish to highlight the current absence of e-SAF specific funding calls which are a vital to addressing the implementation of these projects. NEG8 is committed to realising the potential of e-SAF projects but without significant stimulus to de-risk large scale FOAK projects, meaningful progress to decarbonising aviation remains difficult.

The Need for Investment in Aviation

The Sustainable Transport Investment Plan (STIP) is a strategic mechanism to accelerate the production and distribution of renewable and low-carbon transport fuels across the European Union. Its objectives are to de-risk the substantial capital investment required for rapid scale-up, to strengthen the EU's energy independence and energy security, and to reduce greenhouse gas (GHG) emissions in line with the EU's climate objectives.

Transport underpins the EU's economic and social function, enabling free movement of people and goods across Member States. Decarbonisation of all transport modes is therefore essential.

Transport accounts for a notable portion (approx. 25%) of Europe's emissions profile, and while road and rail are progressing towards electrification, aviation faces unique technical challenges that preclude full electrification at this point.

Aviation is one of the most difficult sectors to decarbonise due to limited viable alternatives to liquid fuels. However, SAFs provide a drop-in solution compatible with today's fleets and infrastructure. This makes SAF, and particularly e-SAF, a central pillar of decarbonisation.

What is the Difference between SAF and e-SAF?

While SAF includes biofuels derived from, for example, biomass, vegetable oils and waste fats, e-SAF is a specific type of SAF made using green energy to produce hydrogen and captured CO₂ which are synthesised into aviation fuel. **e-SAF has unlimited capacity, unlike biofuel-derived SAF which is limited by the supply of feedstock, nor does e-SAF have the same environmental impact.**

NEG8 Carbon is positioned to supply CO₂ feedstock for e-SAF production via DAC carbon capture. **This ensures an infinite, sustainable, high-purity, and verifiable carbon source for fuel synthesis which directly enables compliance with the most stringent sustainability criteria under EU law.**

However, there is a critical gap between regulatory ambition and market capacity. The underlying technologies for e-SAF are proven and technically mature, however, the bottleneck lies in financing, market confidence, and infrastructure readiness.

STIP's role is therefore to catalyse large-scale deployment of fuels that can be used immediately in existing aviation fleets without compromising safety or performance.

Aviation's Decarbonisation

Aviation remains a cornerstone of trade, tourism, and economic connectivity. Passenger volumes have rebounded to above pre-pandemic levels, and freight demand continues to grow. Without decisive intervention, aviation's share of total EU GHG emissions will rise.

Closing the Gap

To achieve the EU climate goals and comply with regulations such as ReFuelEU, STIP should focus on targeted risk-sharing measures, such as grants, contracts for difference, and loan guarantees, to support rapid scaling of large-scale e-SAF projects. It should also promote cross-border collaboration on feedstock supply, including green hydrogen and CO₂, alongside infrastructure and offtake agreements.

Contact Us

NEG8 Carbon welcomes all engagement on this matter and can be contacted at info@negcarbon.com.