



MISSION POSSIBLE PARTNERSHIP

Leaders in the aviation industry set out ambitious pathway to phase out fossil fuel in air travel by 2050

Aviation leaders including United Airlines, Delta Air Lines and KLM Royal Dutch Airlines have outlined a bold new climate scenario for the aviation transition drafted by the Mission Possible Partnership (MPP) to get to net-zero emissions by 2050 with minimal reliance on offsetting carbon emissions. Fossil jet fuel could be replaced by Sustainable Aviation Fuels (SAFs) and new hydrogen and battery-electric propulsion aircraft by 2050, according to 10 critical insights published today.

In pursuit of net-zero, in September 2021, 60 organizations brought together by the MPP-supported Clean Skies for Tomorrow coalition, including airlines, airports, fuel suppliers, aircraft manufacturers, frequent corporate flyers, and freight forwarders released an unprecedented ambition statement to accelerate the deployment of SAFs to reach 10% of global aviation fuel demand by 2030. In addition, on 4 October 2021, the International Air Transport Association (IATA) committed to the goal of net-zero carbon emissions by 2050 – a move that has long been awaited by industry leaders.

The ten critical insights, unveiled today by MPP, articulate a climate-ambition pathway, aimed at informing executives in the aviation value chain and policymakers about how to reach these bolder targets, by highlighting the technology deployment, timing, and the cost and scale of actions necessary to deliver net-zero within the sector.

“Net zero aviation by 2050 is a realistic target,” says Neste CEO, Peter Vanacker, “As the insights from the CST/MPP Aviation Transition Strategy demonstrate. However, there is no time to wait. Sustainable aviation fuel is one solution that is available today and can be scaled up to its full potential for reducing aviation's emissions. At the same time, we need to innovate to also enable the future solutions that will be needed along the journey. The transition does not happen fast enough unless regulators around the world set binding targets for emission reduction within aviation and create the right policy frameworks to achieve those. Neste is a steering committee member in the Clean Skies for Tomorrow coalition and proud to support its valuable work in driving the sector towards carbon neutral flying through the deployment of SAF.”

Sustainable Aviation Fuels are key for the transition

Full decarbonisation will entail a massive ramp-up of SAF production and use. SAFs will indeed be the only viable, large-scale option to decarbonize aviation in the next 10-20 years.

A growing number of industry leaders are committing to reach 10% SAF in aviation by 2030. The MPP's climate-ambition pathway shows that an even more ambitious trajectory, with SAF potentially reaching up to 25%-30% of the sector's energy demand in 2030, could theoretically be met if immediate, systemic, and large-scale action unlocks SAF production and infrastructure scale-up, resulting in a rapid reduction in the cost premium of SAFs, which are currently 2-5 times as expensive as fossil jet fuel.

This rapid emissions reduction trajectory could save 25 billion tons of cumulative CO₂e emissions from now to 2050, an equivalent of half the current annual global greenhouse gas emissions. But an additional annual investment of about US\$ 300 billion would be required to make this a reality, with the lion's share of this investment – 95% going into fuel production processes, including renewable electricity generation as an input to hydrogen, power-to-liquid fuels, and other SAF. A decarbonised aviation sector could indeed require a tenth of global electricity demand by 2050: the roll-out of power-to-liquid fuels – and after 2040 also the larger-scale ramp-up of battery-electric and particularly hydrogen aircraft – will require up to 10,000 TWh of additional renewable electricity capacity by 2050.

To minimize the cost of the transition, MPP recommends combining the deployment of SAFs and new propulsion aircraft with improvements in engine efficiency, aerodynamics, airframe weight, air traffic management and ground operations.

“As the world's leading logistics provider, it is our responsibility to lead the way and to guide the logistics industry into a sustainable future” says Melanie Kreis, CFO Deutsche Post DHL Group & Member of the CST Steering Committee.

Kreis continues, “In line with our Mission2050: Zero Emissions and our commitment to the Business Ambition for 1.5°C campaign (science-based target initiative), we have recently announced our target to use more than 30% SAF by 2030. We are very proud to be among the first customers of atmosfair's production plant in Germany, the world's first efuels production site. In addition to our continuous re-fleeting efforts, 12 fully electric Alice eCargo planes will enter our aviation network as from 2024. We are ready to invest EUR 7bn in sustainable and clean technologies and we believe the transition to sustainable aviation is possible.”

Patrick Hansen, CEO of Luxaviation shared “Our people are passionate about flying and ardent environmentalists. We are convinced that both these interests are not mutually exclusive. To the contrary, we believe that sustainability must be a key focus of the business aviation industry and, as one of the global leaders in this segment, while we are dedicated to implementing short-term solutions, we strongly feel that it is an absolute necessity to start today formulating and implementing transition strategies to a truly sustainable aviation over the next 30 years.”

MPP-supported Clean Skies for Tomorrow is mobilizing the full value chain to deliver on the net-zero goal

With the support of MPP, the [Clean Skies for Tomorrow Coalition](#) has started its journey from ambition to action, tackling each of the key change drivers identified in the critical insights:

- It developed and published the SAF framework, conceptualizing a new accounting framework and standard that facilitates procurement of SAF by allowing SAF emissions reductions to be claimed by travellers and cargo customers if they are willing to cover the higher costs.
- It initiated a dialogue between the aviation sector and financial institutions, leading to the development of a blueprint for the de-risking and financing of SAF plants, published today as part of the World Economic Forum's "Financing the Transition to a Net-Zero Future" Insight Report.
- It is working with a group of leading governments, in partnership with the leadership of the UK Government in their role as UNFCCC COP26 President, to release a policy toolkit at COP26, serving as an indicative "menu of options" for policy-makers worldwide in support of scaling sustainable SAF markets across regions.

Note: A more comprehensive aviation transition strategy, containing additional scenarios, will be released shortly.

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MPP is an alliance of climate leaders focused on supercharging efforts to decarbonize heavy-emitting industries. The partnership is comprised of four core partners - the Energy Transitions Commission, the Rocky Mountain Institute, the We Mean Business Coalition, and the World Economic Forum. This effort is embedded in the Clean Skies for Tomorrow (CST) and the Target True Zero initiatives of the World Economic Forum.