Renewable energy

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Sustainable aviation fuel ,France

Abstract

Aviation sector stakeholders recognize Sustainable Aviation Fuel (SAF) is critical to reach air transport decarbonization targets, 50 % lower GreenHouse Gas (GHG) emissions in 2050 vs 2005: contrary to road transport, hydrogen and electricity are no alternatives at scale for several decadesSAF has been developed and tested in flight for more than ten years, producers are ready to scale up towards commercial production and up to 7 low carbon technology pathways have been qualified for world-wide, all airplanes usage, with many more in the process of certification by ASTM InternationalPresent production capacity for the most competitive pathway, based on lipids hydrogenation, aka HEFA, could be around 3 to 4 mtpa, and production flexibility between Renewable Diesel (HVO) and HEFA could quickly increase this capacityAir transport is a global, highly competitive activity, with differentiated actors not operating on a level playing field (legacy airlines vs low-cost vs national carriers): fuel cost being a major expense factor, the price gap between SAF and fossil jet-fuel (from 2-4 to 10 times) is the biggest issue and can only be resolved by regulations mandating SAF use on large enough markets to prevent "carbon leakage"With 2050 Net Zero Carbon on the political agenda in many regions, with 2030 as a significant landmark, such regulations are becoming likely this decade, in the US, in the EU for instance: air transport social acceptance, "licence to operate and grow", may well be at stake if decarbonization is too slow and generates rebellions like the Swedish Flight Sham.

Biography:

Philippe marchand had completed his Graduation from graduate from Ecole Nationale des Ponts et Chaussées (Paris, France) and from Ecole Polytechnique de Montréal (Canada) He was a senior adviser in the Biofuels department of the Refining & Chemical division of TOTAL, the French Oil Major, in charge of the development of alternative sustainable aviation and marine fuels and of the promotion of the bioeconomy.

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