

**GCRI INTERVIEW**

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**What kinds of biosynthetic fuels haven't proven to be the most efficient – and why?**

The key issue for aviation biofuels is not efficiency, but whether they are certified for aviation use. This certification is a very thorough process that takes years to complete. Currently, the only two kinds of biofuels approved are HEFA (Hydroprocessed Esters and Fatty Acids)-kerosene and FT (Fischer-Tropsch)-kerosene, and these only in blends up to 50%. Other biofuels may be just as efficient, but are not yet approved. Of the approved fuels, only HEFA-kerosene will be available in the next couple of years. There exist currently no facilities to produce FT-kerosene from biomass except in very small pilot plant scale.

**To what extent will biofuel-powered commercial flights become standard operations in the near future?**

Near-term developments are hard to predict, as this will depend on political parameters, particularly the competition with road use for the same biofuels, since bio kerosene can also be used as a bio diesel. Longer term I am certain that biofuel use will become normal in commercial aviation.

**To what extent will the use of environmentally-friendly fuel increase ticket prices?**

Ideally, not at all. If we simply buy expensive biofuels, and then raise our ticket prices to compensate, we will price ourselves out of the market. Rather, the key focus has to be to see to it that biofuels are no more expensive than conventional fuels.

**What kinds of structural developments will be necessary in order to ensure a long-term and sustainable supply of biofuels for the aviation industry?**

A lot of work needs to be done along the entire supply chain, from the field right up to the blending station. We will need to move away from first generation biomass; we need processing capacity... it will take quite a while to develop all this. One step that will be necessary soon will be to investigate the actual blending potential, based on the existing refinery structure. The 50% blend ratio for HEFA is an upper limit, but the actual ratio achievable depends on the properties of both the neat biofuel and the conventional kerosene. However, very little data is available right now on property distribution and blending behavior.

**What are the goals of Lufthansa's recent "Platform for Sustainable Aviation Fuels" project with the Leuphana University in Lüneburg?**

The university's research results will provide a basis for the development of application-oriented concepts supporting the production of competitive feedstock for alternative fuels. Only feedstock from sustainable cultivation that does not threaten food production and with a positive CO<sub>2</sub> balance will be considered.