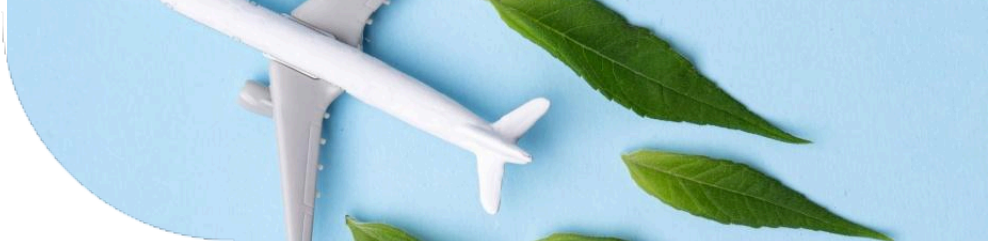

Aviation Bulletin – Reducing Carbon Emissions in Aviation

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Aviation is one of the fastest-growing sources of greenhouse gas emissions.

During the coronavirus pandemic, people could not fly and there was a temporary reduction in the gas emissions, which rebounded quickly after Covid to pre-pandemic level.

The International Civil Aviation Organisation (ICAO) forecasted that by 2025 international aviation emissions could triple compared to 2015.

Aviation generates 13.9% of transport emissions, the biggest source of greenhouse gas emissions, after road transport.

There has been a lot of debate in the industry regarding how to reduce emissions, such as through the use of sustainable aviation fuels, like biofuels and even chip fat or the development of new technologies, like hybrid-electric aircrafts or hydrogen power solutions.

New biofuel

One method, which is becoming popular between airlines, is the use of a fuel created from vegetable and waste oils, rather than traditional fossil fuels. The carbon saving comes from the fuel manufacturing process, rather than from burning the fuel. Although obtaining this type of fuel can sometimes be challenging for the airlines.

Hydrogen

Hydrogen fuel is another method that is getting traction, and some airlines are planning to create new aircrafts that would use hydrogen fuel in the future. However, this method is currently more costly than using fossil fuel.

New technology

On the technology front, recently Rolls Royce has developed a new type of jet engine, called “UltraFan”, which will reduce fuel consumption by 10%.

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The turbine can run very fast and more efficiently than previous models, delivering greater fuel efficiency and lower emissions.

It has already been tested and it looks promising, although it is unlikely that it will be available on commercial aircrafts before 2030.

Route optimisation

Another interesting way to reduce gas emissions in aviation, could be by remapping the routes that are used by commercial airlines. At the moment, commercial planes still use a network of beacons, which were put in place decades ago.

New satellite technology could help aircrafts to fly on a more direct path, by reducing the distance that airplanes have to maintain between them for safety reasons.

In shipping artificial intelligence has been used to optimize the use of fuel and cut emissions. In the same way perhaps, artificial intelligence could be used to optimize route plan, to improve traffic and to enable aircraft to fly the most fuel-efficient flight. By re-mapping the sky and by finding more direct flight paths, AI could help reducing carbon emissions.

Probably a combination of all the above will be necessary if the aviation industry wants to meet its ambitious target of cutting carbon emissions and reach overall carbon neutrality by 2050.

Need Advice

We assist airlines, aircraft operators, and aviation stakeholders tackle key issues like emissions reduction, sustainable fuel adoption, and regulatory compliance. Contact us at online.enquiries@LA-law.com and speak to the Aviation team about how we can help you take flight toward a greener future.

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