

TUI Travel PLC
Position paper on the introduction of biofuels
into the Thomson Airways fleet

- **Thomson Airways is investing a significant amount per year for the next three years on introducing sustainable aviation biofuel (biojet) into its flights from Birmingham airport.**
- **Currently trading at a significant premium cost of jetA1 fuel, biofuel will remain costlier until demand necessitates creation of production infrastructures**
- **UK & EU governments should consider ways to incentivise the use of sustainable aviation biofuel through tax incentives and other fiscal measures**
- **In order to obtain the necessary credits under the EU ETS, we need to amend the way that such fuel use is calculated against CO2 allowances.**

TUI Travel PLC is the world's leading leisure travel company and operates in over 180 countries with more than 30 million customers in 27 key source markets. Thomson Airways is part of TUI UK & Ireland, a division of TUI Travel PLC, and operates some of the best known and loved travel brands including Thomson, First Choice and Thomson Airways which is the UK's third largest airline.

Incentivising carbon-efficient behaviours

TUI Travel is recognised as a leader in sustainable tourism and sustainable aviation and as a group has committed to reducing its direct carbon emissions from its aircraft fleet by 6% by 2013/2014 (against a baseline of 07/08) in terms of total carbon emissions as well as relative (per passenger) carbon emissions. In 2008/09, TUI Travel's airlines decreased their collective carbon dioxide emissions by 3.75% during that financial year, saving over 220,000 tonnes of carbon dioxide.

Thomson Airways operates with one of the highest load factors in the UK industry and therefore makes the most efficient use of its fleet and of the airport slots made available to it. Thomson Airways operates with an emission rate of 76g CO₂ per passenger kilometre flown, significantly lower than average emission rates for both low cost and full service scheduled carriers.

Sustainable Biofuels

The aviation industry is currently dependant on fossil fuel-derived jet fuel. Biofuels will be fundamental in ensuring the aviation sector addresses its environmental and social responsibilities. The UK Government has acknowledged that there are no other short-term alternatives to using a fuel-based energy source in aviation, compared with other modes of transport.

3-year project objectives

1. To demonstrate that future market demand exists for biojet. This will stimulate further industry-wide investment and bring forward the date when production of biojet is commercially viable.
2. To operate daily flights from Birmingham airport on a dedicated aircraft, using a 50% biojet fuel mix in one engine.
3. To quantify any differences in performance or fuel burn of the engine when compared with the non biofuel engine during then life of the trials.
4. To work with industry partners in years two and three to increase the proportion of biojet used in order to reduce cost. Strategic partners working with TUI UK & Ireland are Birmingham Airport, Boeing, Engine Suppliers and SkyNRG
5. To engage with the UK Government & EU Institutions to ensure;
 - The co-development of a policy framework incentivising adoption of an aviation biojet infrastructure
 - The roll out of effective incentives e.g. research and development funding, loan guarantees or other fiscal measures
 - The development and negotiation of co-funding opportunities with key stakeholders to enable an increase in volume commitment in the longer term.

Government policy needs - A call to action

TUI Travel recognises that the UK Government and their European partners are in the process of developing a sustainable biofuels strategy. This should reflect that biojet will be available during 2011 rather than within 10-15 years as originally anticipated. The accelerated pace of biofuel development means there is an immediate need to look at ways to incentivise investment and build a sustainable aviation biofuel infrastructure. This could be achieved through investment in research and development, loan guarantees other fiscal measures. ETS revenues could be used to assist this.

The current EU ETS methodology of crediting biofuel used in flight needs to be revised to take account of biofuels. In particular:

- That the EU ETS allows operators to claim for the biofuels they consume and we believe this is an important principle. Specifically, the EU ETS legislation refers to 'biomass' and we believe that biofuel, or biojet, should be recognised as biomass in the ETS Decision 2007/589/EC and any other relevant legislation.
- That the EU ETS should account for the fact that aviation fuel supply chains are not segregated at airports and biofuels will be subject to a co-mingling effect at various points of the fuel supply chain.

Biofuel regulation in the UK is principally covered by the Renewable Transport Fuels Obligation (RTFO) Order. This Order exclusively focuses on Road transport and should place a greater emphasis on the aviation sector, given that no other low carbon energy source is currently viable.

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Appendix A: Feedstock Information

Used cooking oil

- Truly sustainable waste stream
- Sufficient quantities available for now but lack of collection infrastructure can impede growth in this market
- It is a 'wanted' feedstock and can therefore increase costs over longer term due to competition

Camelina

- Camelina is a flowering plant that needs little water or nitrogen to flourish; it can be grown on marginal agricultural lands and does not compete with food crops. It may be used as a rotation crop for wheat, to increase the health of the soil
- Studies have shown Camelina-based jet fuel to reduce carbon emissions from jets by approximately 80%
- Growth and harvesting uses current agricultural practices, which is favourable for cost
- High sustainability potential
- High up-scaling potential

Babassu

- Babassu is a tall palm tree that grows wild in tropical north-eastern Brazil. The kernels of its hard-shelled nuts are the source of Babassu oil
- Very sustainable, both socially and ecologically
- Limited potential in terms of volume, but easily sufficient for near to medium term demands
- More expensive than other feedstock because the nuts can be difficult to harvest

Animal tallow

- Tallow is animal fat that conforms to certain technical criteria. It is common for commercial tallow to contain fat derived from beef, chicken and pork.
- Large quantities available
- Excellent cost structure
- True waste stream hence has good sustainability potential
- Can present concerns around animal welfare