Omega

Main thematic area: Economics/Science/Technology
Cost: £/££/£££

Omega alternative aviation fuels data centre

Background
There is a range of fuels that could, in principle, be used in aviation. These could be important for carbon dioxide offset, for increased energy security and improved local air quality.

Omega partners already have an established world-class expertise and collaboration in the area of testing and investigating the characteristics of alternative aviation fuels. However a database of alternative aviation fuels allowing accurate records of fuel characteristics to be stored and compared does not exist. Such a resource is crucial in bringing alternative fuels knowledge to the research community, industry and into the public arena.

About the centre
The Omega alternative fuels data centre will fill this gap and provide a database obtained from standard tests. The data will include:
- physical, chemical, operational and environmental properties
- the life cycle analysis (LCA)
- the price relative to the price of crude oil
- health and safety measures.

The database will be searchable by fuel and/or property type with each record containing up to 100 fields and it will include a detailed liquid fuels glossary.

Fuel types
The database will include:
- bio-aviation fuels (eg soya beans, palm oil, switch grass, jatropha and algae)
- butanol, methanol and ethanol
- hydrogen
- coal to liquids
- Fischer-Tropsch aviation fuel
- gas to liquids
- hydrogenation-derived renewable aviation fuel

Benefits
Data collated in this activity will provide detailed technical and commercial information on alternative fuels. It will give useful insight to policymakers, entrepreneurs, fuel users, the aviation industry in general and other parties interested in reducing fossil fuel-based kerosene consumption.

In addition to providing the most robust collection of information available, the database will be linked to data analyses from other sources. It will also enable the identification of knowledge gaps which can then be addressed in further work.

Lead: University of Leeds
Partners: Sheffield
Duration: 9 months

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