



CONFERENCE ON AVIATION AND ALTERNATIVE FUELS

Rio de Janeiro, Brazil, 16 to 18 November 2009

Agenda Item 1: Environmental sustainability and interdependencies

ENSURING SUSTAINABILITY OF RENEWABLE AVIATION FUELS

(Presented by the International Coordinating Council of Aerospace Industries Associations)

SUMMARY

The development of renewable alternative fuels for aviation is an attractive, important and achievable opportunity. To capture this emerging opportunity, considerable work must be done to develop a supply chain able to deliver fuel that is technically capable, economically reasonable, and environmentally beneficial. Specific supporting actions by ICAO and ICAO Member States are needed to accelerate appropriate implementation.

Action by the conference is recommended in paragraph 2.

1. INTRODUCTION

1.1 The International Civil Aviation Organization (ICAO), a UN specialized agency containing 190 member states from around the world, is the global forum for civil aviation. ICAO works to achieve its mandate to ensure safe, secure and sustainable development of civil aviation through cooperation amongst its member states. ICAO has developed a range of standards, policies and guidance material for the application of integrated measures to address aircraft noise and engine emissions. In 2004, ICAO and its member states resolved to continue striving for reductions in aircraft noise and emissions, including GHG emissions. Accordingly ICAO has an interest in new avenues to reduce emissions from aviation and has organized this conference to develop opportunities for alternative fuels that may have lower lifecycle emissions than currently approved fuels.

1.2 ICCAIA encourages adoption of policies that improve the ability of manufacturers to invest in innovation and technology, consistent with international trade obligations, and ICAO CAEP to develop appropriate technical data and methodology for evaluating aircraft/engine fuel efficiency.

1.3 As presented by ACI, CANSO, IATA and ICCAIA at recent ICAO meetings, industry is committed to work with ICAO to forge a global framework to reduce aviation CO₂ emissions. The role

for manufacturers is to develop and deliver more fuel-efficient equipment and products and to support development of alternative fuels in such a framework.

1.4 The development of renewable alternative fuels for aviation is an attractive, important and achievable opportunity. It is attractive because alternative fuels that are fully compatible with existing aircraft, engine and distribution systems can be utilized as soon as supply is available. It is important because alternative fuels with reduced carbon lifecycle, and also reduced non-CO₂ emissions have very high potential to improve the environmental performance of aviation. Carbon lifecycle of more than 50% reduction, as compared to typical petroleum-based aviation fuel, can be demonstrated for some types of renewable alternative aviation-capable fuels. Large transport aircraft require very high energy source, and unlike other transport modes, no technology exists to decouple such aircraft from liquid fuels. It is achievable because the quantity of alternative fuels required for aviation is considerably smaller than would be required for other transport modes. Taken together, these factors make a strong case for directing availability of renewable alternative fuels to aviation as a priority use.

1.5 To capture this emerging opportunity, considerable work must be done to develop a supply chain able to deliver fuel that is technically capable, economically reasonable, and environmentally beneficial. Timely and appropriate establishment of acceptability criteria is required to ensure new fuels are environmentally beneficial. Taking the recommended actions would initiate development of a foundation for acceptability that is consistent with practice for other sectors, yet specific to the needs of aviation. The recommendations also support the mutual interest of ICAO Member States in controlling and reducing emissions.

2. RECOMMENDATIONS

2.1 The conference is invited to:

- a) endorse a resolution that the development and use of renewable alternative fuels for aviation is an important opportunity to reduce aviation emissions;
- b) endorse the development of policy actions by Member States, acting in mutual interest, to accelerate the appropriate development of such fuels;
- c) recommend ICAO play a pivotal role to implement a globally agreed set of sustainability criteria for renewable aviation alternative fuels;
- d) recommend that ICAO consider development of recommended practice to implement sustainability criteria specific to aviation fuels; and
- e) affirm that such criteria should be consistent, to the greatest extent possible, with the generalized criteria developed by other designated international renewable fuel bodies and supporting processes.

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