



Commercial Aviation Alternative Fuels Initiative

Supporting solutions for secure and sustainable aviation

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Significant progress made towards adoption of semi-synthetic aviation fuel

Key steps taken at the ASTM International, Aviation Fuels Subcommittee Meeting to Accommodate Alternative Fuels in New and Existing Specifications

What? December 7 to 11, 2008, Tampa, FL. ASTM International Aviation Fuels Subcommittee Meeting as reported by CAAFI sponsors and Stakeholders

Why? Synthetic fuels need to be included in existing and new aviation fuel specifications to allow use of these fuels on commercial aircraft and to enable their distribution via the current aviation infrastructure.

Who? ASTM International established the Synthetic Fuels Task Force, chaired by CAAFI Steering Committee member Mark Rumizen, an FAA aviation fuels specialist, to develop a synthetic fuel specification. The Task Force comprises sponsors and stakeholders from the aviation fuel industry, including equipment manufacturers and fuel producers; and users from airlines and the Air Force. Many of the Task Force members are CAAFI sponsors.

Meeting Highlights

The ASTM International Aviation Fuels Subcommittee examined five ballots relating to alternative fuels. The subject of the ballots and results obtained were:

- A revision to the ASTM International standard for aviation turbine fuels to add a general statement of the acceptance of semi-synthetic aviation fuels from the FT process was passed by the subcommittee at this meeting.
- A revision to D1655 to allow use of fully synthetic jet fuel from the SASOL refinery in Secunda, South Africa was approved by the subcommittee. This is a coal-derived fuel made primarily from the FT process. While this is an approval of a specific fuel formulation from a specific refinery, and not a generic approval, it is a significant step.
- A research report summarizing the evaluation of candidate FT fuels for support of the above two ballots was approved by the subcommittee, and represents a key step in gaining approval of generic blends.
- A new standard describing guidelines for the technical evaluation and approval of new alternative fuels and fuel additives. This document was deemed to be nearly complete with only one comment yet to be resolved.

- A new specification for alternative aviation fuels containing synthesized hydrocarbons. The proposed specification describes the fuel properties and criteria necessary to control the manufacture and quality of these fuels for aviation use.

This new specification, called “DXXXX” constructs a framework to enable the use of multiple alternative fuels (including both non-renewable and renewable blends) for aviation, and targets complete interchangeability with conventional fuels produced to specification D1655. This specification is being structured, via appendices, to enable use of fuels from the FT process first, and then follow with hydrotreated renewable fuels and other alternatives as data from technical evaluations is obtained. At this meeting, comments to the draft specification were reviewed and next steps were agreed upon. There is a good potential for approval of the DXXX specification by the next ASTM meeting in June 2009 according to meeting contributors.

Meeting participants were uniformly pleased with the subcommittee’s progress. Summing up the sentiments of many attendees, Craig Fabian, Director of Technical Operations for the Air Transport Association of America representing U.S. Airlines, termed the outcome as "extremely positive," noting in particular, that "great strides (were made) toward adoption of the first ‘generic’ alternative jet fuel blend."

About CAAFI

CAAFI’s mission is to enhance energy security and environmental sustainability for aviation through alternative fuels. CAAFI is a forum that focuses the efforts of the U.S. commercial aviation supply chain to engage the emerging alternative fuels industry. It enables its diverse participants — representing all the leading stakeholders in the field of aviation — to build relationships, share and collect needed data, and motivate and focus research on aviation alternative fuels. See CAAFI Fact Sheet: <http://web.mit.edu/aeroastro/partner/caafi/caafi-descrip.pdf>

The account above represents the view of CAAFI sponsors and stakeholders participating in the ASTM International meeting and does not represent the position of ASTM International

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