



CONFERENCE ON AVIATION AND ALTERNATIVE FUELS

Mexico City, Mexico, 11 to 13 October 2017

Agenda Item 1: Developments in research and certification of aviation alternative fuels

WORK OF THE ALTERNATIVE FUELS TASK FORCE

(Presented by the ICAO Secretariat)

SUMMARY

This information paper provides details on the work being performed by the Alternative Fuels Task Force (AFTF) of the ICAO Committee on Aviation Environmental Protection (CAEP).

1. INTRODUCTION

1.1 The 38th Session of the ICAO Assembly reaffirmed ICAO Member States' support to the development and deployment of sustainable alternative jet fuels as part of a basket of measures to reduce aviation GHG emissions. Along with inviting States to develop policies to accelerate the appropriate use of such fuels in accordance with their national circumstances, the Resolution requested the ICAO Council to “*collect information on progress of alternative fuels in aviation, including through States' action plans, to give a global view of the future use of alternative jet fuels and to account for changes in life cycle GHG emissions in order to assess progress toward achieving aviation global aspirational goals*”.

1.2 In response to these outcomes, the ICAO Committee on Aviation Environmental Protection (CAEP)¹ established the Alternative Fuels Task Force (AFTF) in 2013 to provide technical input to fulfil the Assembly request. This paper provides further details on the work of AFTF since its creation.

2. CAEP/10 WORK

2.1 During the CAEP/10 cycle (from 2013 to 2016), AFTF was tasked with providing information related to aviation alternative fuels (AAF) for inclusion in the ICAO environmental trends projections requested by the ICAO Assembly. This involved the definition of a methodology for assessing fuels life-cycle emissions, and projections of scenarios for AAF production up to 2050, with the final objective of assessing the possible range of emissions reductions from the use of AAFs. The final results

¹ <https://www.icao.int/ENVIRONMENTAL-PROTECTION/Pages/CAEP.aspx>

of this analysis were presented during the 39th Session of the ICAO Assembly (27 September to 7 October 2016). Additional details surrounding this analysis are available in CAAF/2-WP/06.

3. CURRENT STATUS OF WORK

3.1 Given the relationship between AAFs and the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), AFTF has been conducting joint meetings with the CAEP Global Market-based Measures Task Force (GMTF). These joint meetings have facilitated increased coordination between the GMTF and AFTF on work related to the development of Standards and Recommended Practices (SARP) for CORSIA. Additional details regarding CORSIA are provided in CAAF/2-IP/03.

3.2 During the current CAEP/11 cycle (from 2016 to 2019), the AFTF was assigned with seven tasks, described as follows:

3.2.1 **Task S.01 – Computation of alternative fuels land use change emissions** – AFTF is carrying out computations of Induced Land Use Change emissions associated with AAF production for varied world regions. The inclusion of land use change is a key aspect of the lifecycle analysis methodology. The conclusions from these analyses will be used to determine the level of AAF emissions to be reported under CORSIA.

3.3 **Task S.02 – Computation of default values for aviation alternative fuel lifecycle emissions** – Using a methodology developed by AFTF during CAEP/10, the AFTF is carrying out computations of “core” LCA default values that could be used by operators to report emissions reductions from the use of sustainable aviation fuels. “Core” lifecycle emissions designate the emissions from the feedstock production to the tank of the aircraft, excluding land use change emissions which are separately dealt with under Task S.01. AFTF is also analysing the technical variables associated with a possible threshold on sustainable aviation fuel (SAF) lifecycle greenhouse gas (GHG) emissions reduction for eligibility under the CORSIA.

3.4 **Task S.03 – Aviation and global atmosphere update** – AFTF was requested to contribute to an update of the information contained within the 1999 Intergovernmental Panel on Climate Change (IPCC) *Special Report on Aviation and the Global Atmosphere*.

3.5 **Task S.04 – Guidance on potential policies** – Under this task, AFTF collected literature regarding existing policy instruments intended to incentivize deployment of alternative fuels, as well as information related to barriers, disincentive mechanisms, or policy externalities. The review of this literature is currently ongoing. Using the examples collected, the Task Group will identify “potential policies” that are determined to be possible, effective, and practical and that could be considered within the aviation industry. Finally, the Task Group will perform an analysis to identify elements of these policies that can be improved through increased cooperation between States. Additional details regarding the current status of this task is provided in CAAF/2-WP/11.

3.6 **Task S.05 – Sustainability criteria** – Under this task, AFTF is developing recommendations on environmental, social, and economic sustainability criteria for SAFs in the context of their recognition under the CORSIA. To the extent possible, these criteria are being developed based upon existing sustainability standards. AFTF is also working to develop CORSIA eligibility requirements for existing Sustainability Certification Schemes (SCS) for SAFs.

3.7 **Task S.06 – Roundtables** – AFTF is holding roundtable discussions in order to bring together relevant experts on an “as needed” basis. These roundtables are intended to allow for further

scientific and technical discussions within AFTF outside of the main work stream. In this regard, a roundtable on Sustainability Certification took place on 17 October 2016 at ICAO Headquarters, and was attended by non-AFTF experts from sustainability certification standard organizations and fuel producers/suppliers. The information shared regarding existing sustainability certification schemes (e.g., selection of criteria, auditing and demonstration means, regional varieties) and challenges for implementation proved to be valuable for the work being done by AFTF.

3.8 **Task S.07 – Putting aviation emissions into context** – Under this task, AFTF is providing inputs for a scope of work for putting international aviation emissions into the context of a 1,000 GtCO₂ emissions budget remaining to limit global warming to 2°C, as defined by the IPCC.

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