



**WORKING PAPER**

**ASSEMBLY — 41ST SESSION**

**EXECUTIVE COMMITTEE**

**Agenda Item 17: Environmental Protection – International Aviation and Climate Change**

**CORSIA IMPLEMENTATION AND RECOGNITION OF ITS ELIGIBLE FUELS**

(Presented by Qatar)

**EXECUTIVE SUMMARY**

This working paper highlights the concerns of the State of Qatar that air operators may end up using low carbon fuels under a patchwork of different national or regional regulations that may lead to complexity and duplication in compliance or create a variance in the level of commitment. It is critical that ICAO leads this process by laying down some principles that would accelerate the adoption and support the use of Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) Eligible Fuels.

**Action:** The Assembly is invited to:

- a) urge the ICAO Council and the Third Conference on Aviation and Alternative Fuels, to agree on a global roadmap for the use of CORSIA eligible fuels (i.e. SAF and LCAF) as ICAO's lead on this matter is critical to avoid the disruptions brought by local and regional SAF mandate schemes; and
- b) encourage the Member States to adopt a set of principles related to the use of CORSIA Eligible Fuels as indicated in paragraph 3.1. b) below.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective – <i>Environmental Protection</i>
<i>Financial implications:</i>	The activities referred to in this paper will be undertaken subject to the resources available in the ICAO 2023 – 2025 Regular Budget and/or from extra budgetary contributions.
<i>References:</i>	<ul style="list-style-type: none"><li>• Doc 10140, <i>Assembly Resolutions in Force</i> (as of 4 October 2019)</li><li>• ICAO Assembly Resolution A40-18</li><li>• ICAO Assembly Resolution A40-19</li></ul>

## 1. INTRODUCTION

1.1 The State of Qatar welcomes the leadership and commitment of ICAO and the aviation sector to address CO<sub>2</sub> emissions and climate change through the use of aviation fuels with lower carbon impact.

1.2 Sustainable Aviation Fuels (SAF) and Lower Carbon Aviation Fuel (LCAF), known as CORSIA eligible fuels, are one of the implementation elements of ICAO Annex 16 — *Environmental Protection, Volume IV — Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)* as well as part of the ICAO basket of measures to reduce aviation emissions. CORSIA allows aircraft operators to reduce its offsetting requirements through the use of CORSIA eligible fuels.

## 2. CORSIA ELIGIBLE FUELS

### 2.1 *Lower Carbon Aviation Fuel (LCAF) and Sustainable Aviation Fuels (SAF)*

2.1.1 Technologies supporting LCAF production are well identified such as low carbon intensity electricity, Carbon Capture and Sequestration (CCS), and renewable and low carbon intensity hydrogen. Many technologies are fully available and can be immediately implemented, including best-in-class practices to reduce venting, flaring and to manage fugitive emissions, particularly for methane (well known as being more than 25 times as potent as carbon dioxide at trapping heat in the atmosphere).

2.1.2 On this basis, we are extremely confident that LCAF will become commercially available with a sharp production increase well before 2030, which will not only support a short-term path to reducing aviation fuel Greenhouse gas (GHG) emissions, but will also precede the marketing of increasing volumes of SAF which need to be blended with conventional Jet-Fuel. LCAF/SAF blending appears to be the most efficient way to get the significant carbon intensity reduction, needed during the stepwise deployment of SAF production industry (*please refer to Scenario 3 in the below Table 1*). It is noteworthy to highlight the difference between LCAF and SAF, in which the former is not bound by feedstock availability or blending restrictions. In other words, once LCAF is produced at a facility, then all jet fuel being refined by the said facility will classify as LCAF, which gives it a great advantage to meet the short-term to medium-term demands for low carbon fuels (*please refer to Scenario 1 in the below Table 1*).

2.1.3 Sustainable Aviation Fuels are an important element to reach any agreed long-term aspirational goal; however, there are many challenges that limit immediate production/scale up, and States are still in the exploratory phase to study the feasibility of SAF production with its increased cost and consequent implications on air travel connectivity.

2.1.4 ICAO's ACT-SAF (Assistance, Capacity-building and Training for SAF) is an important initiative that should be expanded to cover other aviation fuels. ICAO needs to assure that all Member States are enabled by providing the needed capacity building, financial support and technology transfer.

2.1.5 Some production pathways and technologies that are considered as the most promising for CO<sub>2</sub> reduction, i.e. using captured atmospheric CO<sub>2</sub> and scaling green and blue Hydrogen to produce 'synthetic kerosene', still require major development and must prove their commercial feasibility for large-scale deployment.

2.1.6 There are also major challenges to be addressed, especially regarding the certification of SAF and the varying sustainability criteria for SAF certification. The industry should re-examine the sustainability criteria of most feedstock used today and determine if such feedstock meets the long-term aspirations. Moreover, the lack of a global registry to track the use of certified SAF and the retirement/claiming of its CO<sub>2</sub> emissions reduction, remains a significant challenge.

2.1.7 Table 1: Various scenarios for different fuel stream ratios between LCAF and SAF and their availability and feasibility

Scenario	Scenario 1	Scenario 2	Scenario 3	Scenario 4
<b>Fuel Stream Ratios (LCAF and SAF)</b>	<ul style="list-style-type: none"> <li>• 100% LCAF</li> <li>• 0% SAF</li> </ul>	<ul style="list-style-type: none"> <li>• 0% LCAF</li> <li>• 50% SAF</li> </ul>	<ul style="list-style-type: none"> <li>• 50% LCAF</li> <li>• 50% SAF</li> </ul>	<ul style="list-style-type: none"> <li>• 0% LCAF</li> <li>• 100% SAF</li> </ul>
<b>Emission Reduction from Fuel Streams</b>	10% Emission Reduction	40% Emission Reduction	45% Emission Reduction	80% Emission Reduction
<b>Availability &amp; Feasibility</b>	Highest Availability Highest Feasibility	Low Availability Low Feasibility	Low Availability (SAF) Low Feasibility (SAF)	Not Available Lowest Feasibility

### 3. RECOMMENDATION

#### 3.1 The State of Qatar calls on ICAO’s 41st Assembly to:

- a) Urge the ICAO Council and the Third Conference on Aviation and Alternative Fuels, to agree on a global roadmap for the use of CORSIA eligible fuels (i.e. SAF and LCAF) as ICAO’s lead on this matter is critical to avoid the disruptions brought by local and regional SAF mandate schemes; and
- b) Call upon the ICAO Member States to adopt the following principles for the use of CORSIA eligible fuels:
  - i. Incentivize the use of CORSIA eligible fuels (rather than penalizing airlines or taxing fossil-based jet fuel);
  - ii. Recognize LCAF as CORSIA eligible fuels in national or regional regulations on the use of SAF;
  - iii. Decouple the emissions reduction of SAF from the physical delivery and recognize the Book & Claim without any geographical limitation;
  - iv. Establish an agreed, harmonized global registry system (that does not double count the claiming of Scope 1 and Scope 3 emissions reductions) for the certification, verification, trade, and retirement of the emission reduction credits resulting from the use or trade of CORSIA eligible fuels; and
  - v. Consider existing long-term commercial agreements between airline operators and fuel suppliers and maintain the status of the eligible fuels based on the time the contract was signed for the commercial agreements period validity before making any future change in the sustainability criteria of CORSIA eligible fuels. Any changes to the sustainability criteria shall highlight the effective dates to avoid interfering with existing contractual arrangements.