



WORKING PAPER

ASSEMBLY — 40TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 16: Environmental Protection – International Aviation and Climate Change — Policy and Standardization

Agenda Item 17: Environmental Protection – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)

INDUSTRY VIEWS ON THE BASKET OF MEASURES AND A LONG-TERM GOAL

(Presented by the Airports Council International (ACI), the Civil Air Navigation Services Organisation (CANSO), the International Air Transport Association (IATA), the International Business Aviation Council (IBAC) and the International Coordinating Council of Aerospace Industries Associations (ICCAIA) coordinated by the Air Transport Action Group (ATAG))

EXECUTIVE SUMMARY

The industry is determined to reduce its emissions through technology, sustainable aviation fuels, operational measures and better infrastructure. The working paper notes the efforts made by the industry in exceeding its short-term climate action goal and notes the industry's view that the Council should develop a long-term goal for international civil aviation for adoption at the 41st Session of the ICAO Assembly.

Action: The Assembly is invited to:

- a) recognize the efforts made by the industry in exceeding its short-term climate action goal of improving its annual fuel efficiency by an average of 1.5%;
- b) recognize the commitment made by the industry to pursuing carbon-neutral growth from 2020 through a range of emissions-reductions measures underpinned by CORSIA; and
- c) request the Council to develop, with the full support and collaboration of industry, a long-term climate goal for international civil aviation for adoption at the 41st Session of the ICAO Assembly.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective: Environmental Protection.
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<i>Financial implications:</i>	Not applicable.
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<i>References:</i>	
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¹ Arabic, Chinese, English, French, Russian and Spanish versions provided by IATA.

1. AVIATION'S COMMITMENT TO ADDRESS ITS CLIMATE IMPACT

1.1 In 2009, the civil aviation industry set three global goals to address its climate impact: a short-term efficiency improvement goal of 1.5% per annum; a mid-term goal to cap net CO₂ emissions through carbon-neutral growth from 2020; and a long-term goal to halve net aviation CO₂ emissions by 2050 when compared with 2005 levels. We note that at the 75th IATA Annual General Meeting held in Seoul on 1-3 June 2019, IATA member airlines overwhelmingly adopted a Resolution on the implementation of CORSIA which reaffirmed those global commitments.²

1.2 Through the introduction of new aircraft technologies, more efficient operations and infrastructure improvements, the industry is exceeding its short-term climate action goal with current analysis showing a 2.3% improvement on a rolling average – an efficiency improvement of 17.3% since 2009³.

1.3 The industry is currently undertaking a thorough analysis of the potential pathways to its own long-term goal, in line with the necessary action from across the broader economy noted in the Paris Agreement and IPCC analysis. This will identify how the aviation sector can achieve significant CO₂ emissions reductions by deployment of new technology, operational elements, infrastructure improvements and sustainable aviation fuels (SAF) up to and beyond 2050.

1.4 In 2010, the 37th session of the ICAO Assembly adopted the following goals for aviation: a global annual average fuel efficiency improvement rate of 2 per cent until 2020; an aspirational global fuel efficiency improvement rate of 2 per cent per annum from 2021 to 2050; and a collective medium-term global aspirational goal of maintaining global net CO₂ emissions from international aviation from 2020 at the same level, through carbon neutral growth.

1.5 The industry has shown extraordinary innovation throughout its years of service to global connectivity. It has conquered the skies through technological innovation and it can conquer its climate change impact as well.

1.6 The industry is now preparing for an energy transition away from fossil fuels and towards sustainable aviation fuels, produced from a range of sources, including waste, sustainable biomass and synthetic options. SAF production at a level and price to allow widespread adoption by airlines can be a game-changer in terms of aviation's CO₂ emissions and will be a major factor in the industry meeting its 2050 goal.

2. AN ENERGY TRANSITION

2.1 As the sector explores electric and hybrid propulsion opportunities which may enter service in the mid- to long-term, the transition towards SAF brings with it significant CO₂ reductions and forms an essential building block in our basket of measures for mid- and long-haul flights. A number of win-win opportunities for SAF production are available but the key now is to significantly scale up production which will help reduce the cost of these fuels. Government support will be essential to help with this required transition.

² <https://www.iata.org/pressroom/pr/Documents/resolution-corsia-agm-2019.pdf>

³ ATAG Fact Sheet, 2019

2.2 Any SAF being used by the sector must meet globally-agreed sustainability criteria to provide the necessary assurance that there is no harm to biodiversity, land-use, food or water systems, or local populations. The industry supports the adoption of a broader set of sustainability criteria for SAF claimed under CORSIA and the continuing work in ICAO to complement the core requirements already adopted by the ICAO Council. A globally harmonized approach to sustainability will provide clarity that will help to remove barriers to the take up of SAF and supporting investment in this vital new sector.

3. INDUSTRY CONTRIBUTION TO THE BASKET OF MEASURES

3.1 Manufacturers are committed to fully contributing to the long-term industry goal and have made impressive contributions to the improvements already made since the industry announced its climate change goals, mainly through the introduction of new aircraft technologies which offer fuel efficiency gains of between 15 to 25% over the technology they replace. Thus, today's newest typical single aisle aircraft consume around 2 litres of fuel per seat per 100km.

3.2 Manufacturers continue to prioritize environmental performance and currently spend \$15 billion per year globally on efficiency-related research, technology and development of aircraft, engines and systems, including pathways towards electric propulsion, hybrid-electric systems, new energies, digitalisation and lighter materials which have the potential to add to inspiring achievements to date.

3.3 Advances in technology will take time to filter through to the fleet as whole. It is, therefore, important that ICAO recognizes the importance the other elements of the basket of measures will also have in reducing aviation's emissions.

3.4 ICAO states will need to play a crucial role in this journey, as well as continuing their important role of developing global standards.

3.5 Airlines are implementing significant performance improvements in operational aspects. Operational measures include identifying weight savings in the current fleet, allowing the aircraft to burn less fuel. Airlines have been investing in lightweight seats and cabin equipment and even replacing heavy pilot manuals with tablet computers. Other examples of operational measures include single-engine taxiing and idle reverse thrust. The Resolution mentioned in paragraph 1.1 also urges IATA member airlines to implement all available fuel efficiency measures to continue the industry's efficiency improvement history, including investing in fleet replacement, undertaking operational measures and working with industry partners to make greater strides in infrastructure measures.

3.6 Air traffic management organisations are deploying new technologies that increase capacity while reducing delays such as artificial intelligence, automation, digitisation, and space-based surveillance; as well as operational procedures such as performance-based navigation (PBN), free route airspace (FRA), collaborative decision-making (CDM), air traffic flow management (ATFM) which shorten routes, reduce the need for airborne holds and enable fuel saving practices such as continuous descent and continuous climb. They are also collaborating with partners to improve ground movement efficiency and taxiing procedures. All these technologies and procedures enable aircraft to fly safer, shorter, optimum, cost-efficient routes, which reduce emissions from aircraft.

3.7 Airports can have a limited impact on emissions from jet fuel, but are undertaking significant action to reduce emissions from their own operations.

3.8 This includes practical measures such as the Airport Carbon Accreditation programme which is celebrating its 10th anniversary. It has become a global industry standard for airports all over the world: 275 accredited airports (as of July 2019); located in 71 States across all continents; and, welcoming 44% of global air passenger traffic. ACI also supports its member airports and States through the provision, free of charge, of tools such as Airport Carbon and Emissions Reporting Tool (ACERT) and Aircraft Ground Energy System - Simulator (AGES-S), as well as practical Handbooks on reducing the environmental impact of activities on and around airports.

3.9 ACI supports the development and promotion of the use of Sustainable Aviation Fuel (SAF) and several airports, such as Oslo, Stockholm, Seattle and San Francisco, have already started initiatives to supply SAFs. These airports have developed business cases which support stakeholders and local governments. Additional studies should help the industry to better understand how these initiatives could be extended to other airports and how airports can act as facilitators for the wider use of SAFs on a commercial scale.

3.10 At their recent respective Assemblies, ACI World and ACI Europe have adopted Resolutions encouraging ICAO to become more ambitious and to show leadership in setting long-term sectoral goals for further emissions reductions. They do so in the light of the obligations many member airports have to their States under the Paris Agreement, with respect to national commitments on reducing greenhouse gas emissions, and cognisant of the additional call to action from the IPCC Special Report, Global Warming of 1.5°C.

4. LONG-TERM GOAL

4.1 As noted in Paragraph 1.1, the industry is already committed to halving its net aviation CO₂ emissions by 2050 when compared with 2005 levels and fully supports further work in ICAO towards the adoption of a long-term goal for international aviation at the 41st session of the ICAO Assembly.

5. CONCLUSION

5.1 The Assembly is invited to take note of the commitment of the industry, our progress towards our goals and request the Council to develop, with the full support and collaboration of industry, a long-term climate goal for international civil aviation for adoption at the 41st Session of the ICAO Assembly.

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