CORSIA: The Airlines' Perspective

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FROM 2009 TO 2019

Reducing fuel use (and associated emissions) has been a priority for airlines since the start of commercial air travel. With fuel costs representing about a quarter to a third of operating costs, improving fuel efficiency has been an evident strategic choice for airlines. At today's price of fuel (as of April 2019), when an aircraft emits 1 tonne of CO_2, it burns over USD200 worth of fuel.

But fuel costs are not the only incentive for airlines to mitigate their emissions. Airlines recognize that air transport contributes to climate change - currently 2% of man-made CO_2 emissions - and they are taking the responsibility to lessen this impact extremely seriously.

In 2009, under the umbrella of the Air Transport Action Group (ATAG), representatives of the entire aviation industry adopted three targets for the sector:

1. An improvement of its fuel efficiency by an average of 1.5 per cent per annum from now through 2020;
2. Capping the growth of its net carbon emissions from 2020 (carbon-neutral growth from 2020); and
3. Halving its net emissions by 2050 compared to 2005 levels.

Ten years after the adoption of these targets, the sector is more resolute than ever to deliver on its commitments. The short-term goal to improve fleet fuel efficiency by an average of 1.5% per annum from 2009-2020 is on track, with current analysis showing a 2.3% improvement on a rolling average – an efficiency improvement of 17.3% since 2009 (source: IATA/ATAG). And while fuel efficiency improvements will not be sufficient to stabilize emissions at 2020 levels in the short- to medium-term, ICAO's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and sustainable aviation fuels will enable the sector to achieve carbon neutral growth.

However, both our short-term efficiency goal and the CORSIA project will not be enough by themselves for our industry to play its part in the global response to climate change – our long-term goal and the associated *reductions* in CO_2 from the sector will be required.

COUNTDOWN TO CORSIA

The implementation of CORSIA has raised a few challenges for the airline and business aviation community. It is estimated that close to a thousand operators worldwide fall within the scope of CORSIA's obligations, with many of them being small operators with limited resources.

In 2017, the Air Transport Action Group (ATAG) and IATA, in coordination with IBAC and regional airline associations, launched "Countdown to CORSIA". The "Countdown to CORSIA" campaign included workshops, guidance materials and information toolkits. Close to 700 participants, representing more than 270 aircraft operators, took part in the workshops held in 2017 and 2018. More workshops will be held in the second half of 2019.

Another challenge some airlines have faced in their initial preparations for CORSIA has been to ensure their systems are appropriate to handle the significant amount of data that will need to be collected and reported. To offer a solution to interested airlines, IATA developed FRED+, a system which operators can use to store, handle and compile data for CORSIA. The system also allows data to be transmitted from operators to states and verifiers and can be paired with the fuel management software

that airlines already use. This complements the ICAO CO_2 Estimation and Reporting Tool and other systems that airlines will be able to rely on to facilitate compliance with CORSIA.

The Countdown to CORSIA campaign and capacity building efforts have been a very successful joint-effort from the aviation community. Together with the efforts of ICAO and its Member States to prepare administering authorities under the ACT-CORSIA initiative, they have created a solid foundation for the implementation of CORSIA.

AVIATION AND OFFSETTING

For airlines, the implementation of CORSIA does not distract from the attention put on fuel efficiency measures. Offsetting is not intended to replace advances in technology, operations and infrastructure within the sector. Nor would CORSIA make fuel efficiency any less of a day-to-day priority. Rather, CORSIA can help the sector achieve its climate targets in the short and medium term by complementing emissions reduction initiatives within the sector.

While the airline community views CORSIA and offsetting as a necessary element of its climate change strategy, the large support from airlines is also related to the contribution carbon offsetting projects will make to communities and the Sustainable Development Goals. Indeed, there are many ways to achieve emissions reductions that can be used as offsets, many of which bring other social, environmental or economic benefits relevant to sustainable development.

The demand from aviation for carbon offsets will trigger a lot of investment in new climate mitigation. It is forecast that CORSIA will mitigate around 2.5 billion tonnes of CO_2 between 2021 and 2035, representing an investment in climate projects of at least USD40 billion.

In addition, strong criteria, based on principles commonly applied under existing trading mechanisms and well-accepted carbon offset certification standards, have been adopted by ICAO to determine eligible offsets and will ensure that CORSIA is an effective climate measure.

TARGETING 2050

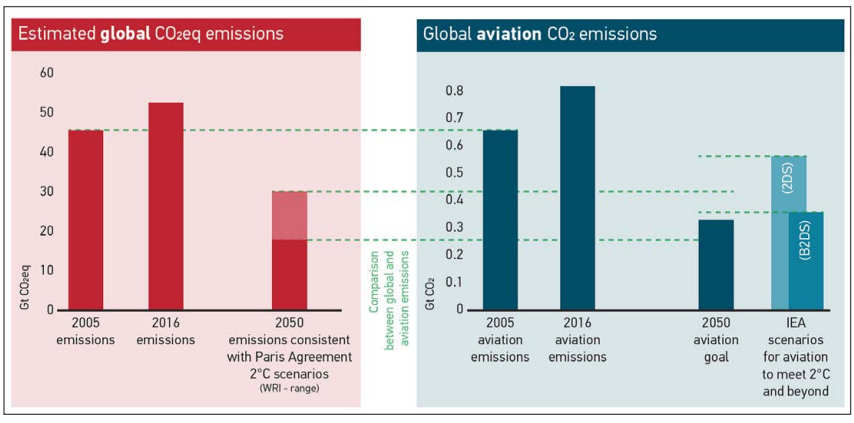
The focus right now is on the success of CORSIA and this work is pressing. However, airlines are on course towards their long-term target of halving net CO_2 emissions by 2050, compared with 2005 levels.

While international aviation was not included under the Paris Agreement's nationally-determined contributions, this does not mean that our sector does not have to play its part in reaching the Paris Agreement's ambitions. On the contrary.

In its 2017 *Energy Technology Perspectives*, the International Energy Agency (IEA) estimates that emissions from the aviation sector should decline to 0.3 $GtCO_2$-eq by 2060 under their "Beyond 2°C Scenario". The IEA notes that this is consistent with the industry's long-term target to halve its net emissions by 2050, compared to 2005.

Naturally, airlines and the broader industry need to put all efforts into ensuring the sector does not deviate from its course. This will require airlines to implement all available fuel efficiency measures and take part in the long-term

FIGURE: Comparison of the aviation industry 2050 goal vs. global emissions levels expected to result from implementation of the NDCs under the Paris Agreement and IEA 2°C scenarios (source: ATAG)



energy transition of air transport towards sustainable aviation fuels. Also, as the fuel efficiency improvement potential of current aircraft configurations is likely to be reduced in the next decades, the development of radically new aircraft, and their seamless integration in future operations, needs to materialize. From 2035 onwards, radical technological innovations with higher fuel efficiencies including new aircraft configurations and new forms of propulsion such as battery or hybrid electric power, can become a reality. Some airlines have already partnered with technology start-ups and research establishments, on some of the over 100 electric aircraft projects currently under investigation. This shows the sector's increasing interest in new technologies.

But the industry cannot achieve its long-term goal on its own. Governments need to support investment in research and development in academic institutions and with joint research programmes with industry. Governments must also foster policies that help support the growth in sustainable fuel deployment and promote their use for aviation, either by providing a level playing field with other uses or by prioritising its use in air transport.

WHAT WE CAN ALREADY LEARN FROM CORSIA

The experience gained in the development and initial implementation of CORSIA is that multilateralism and cooperation between all stakeholders are key to the sustainable development of air transport.

In 2016, ICAO's Member States were able to agree on the first-ever global carbon pricing instrument for a sector.

In less than three years, ICAO was able to adopt international standards to regulate the implementation of the scheme. These standards were drafted jointly by experts from governments, industry, environmental non-governmental organizations and the European Commission and they were adopted by ICAO's Council for their universal implementation in 193 member states.

ICAO, Governments and industry then engaged in large-scale capacity efforts to support all actors involved in the implementation of CORSIA.

And what will be achieved through a global mechanism such as CORSIA – the mitigation of over 2.5 billion tonnes of CO_2 and over USD 40 billion in finance for climate projects - cannot be achieved by a Government, a regional group, or an industry on their own.

While we can be proud of our past and current achievements, aviation cannot ignore the challenges ahead and all stakeholders must preserve the spirit of international cooperation and multilateralism that brought us to where we are. The next necessary milestone: the adoption of a long-term goal by Governments in ICAO, hopefully at the 41st session of the ICAO Assembly.