



CONFERENCE ON AVIATION AND ALTERNATIVE FUELS

Mexico City, Mexico, 11 to 13 October 2017

Agenda Item 2: Financing and assistance programmes for aviation alternative fuels

CONTRIBUTIONS FROM AIRPORTS TO THE SUPPLY OF SUSTAINABLE AVIATION FUELS (SAFs)

(Presented by the Airports Council International)

SUMMARY

This working paper showcases current and planned initiatives by airport operators to support the supply of Sustainable Aviation Fuels (SAFs), discuss the financing opportunities and limitations of such initiatives to be extended to other airports, and recognize that airports could be a facilitator for the deployment of SAFs in a commercial scale when the right business case is in place.

Action by the Conference is in paragraph 4.

1. INTRODUCTION

1.1 Airports have a strong record in reducing their environmental impact, including their CO₂ emissions. For instance, the Airport Carbon Accreditation programme is an excellent airport-based CO₂ measuring and reduction system, established by the Airports Council International and available to airports of all sizes worldwide. This programme, recognized by both the United Nations Framework Convention on Climate Change (UNFCCC) and ICAO, is based on four ascending levels of accreditation of airport carbon management, with carbon neutrality being the highest one. As of 1st September 2017, 193 airports worldwide are accredited under this programme, representing 38.5% of world air passenger traffic.

1.2 Airport emissions are nationally regulated under the framework of the UNFCCC, but it has not impeded airport operators from being very active participants in environmental initiatives with an international impact. As a matter of fact, they support not only the UNFCCC by helping achieve their National Determined Contributions (NDCs), but also engage with their stakeholders to support them in reducing their own emissions, including international aviation emissions. Such stakeholder engagement is also a key requirement for airports that wish to achieve the two highest levels of Airport Carbon Accreditation. In addition, airports are also very supportive of the work undertaken by the ICAO Committee on Aviation Environmental Protection (CAEP) through Airports Council International that has an observer status in the committee.

1.3 The deployment of SAFs on a commercial scale has been an aspirational goal of the aviation community for number of years. The willingness and the technology are available, but the amount of investment posed by the incremental cost of SAF over conventional aviation fuel remains a barrier. Both ICAO and the aviation industry recognize SAFs as an important element to reduce aviation emissions. SAFs are expected to be a ‘game changer’ within the aviation sector, considering that when fully deployed on a commercial scale, they have the potential to reduce lifecycle CO₂ emissions up to 80% when compared with conventional fossil fuels.

1.4 Even if airport operators are not considered the primary beneficiary of the use of SAFs, they have already proved their commitment to reduce aviation’s impact on the environment. Airports can be a facilitator in ensuring that SAF’s are available for consumption and can support the growing market for SAFs on a commercial scale. In this regard, some airports have decided to take the lead in facilitating the supply of SAFs, in order to both achieve their environmental targets, and facilitate the deployment of SAFs on a commercial scale. Other airports are conducting feasibility studies and these studies can be an important tool to create the data base of knowledge necessary to inform other interested airports in how to engage in this endeavour. Details on the above mentioned initiatives are in paragraph 2.

1.5 Considerations, however, should be taken on how to properly finance the supply of SAFs at airports, considering the amount of investment that is needed. For instance, airport ownership (public and/or private) will facilitate or create barriers for such airport investments. Other elements that could affect their ability to invest in SAFs are the availability of grants, subsidies or other policy incentives and/or restrictions from governments and international organisations. For instance, U.S. airports are also limited in ability to invest, based on legal and FAA restrictions on use of airport revenue. Hence, an efficient business case incorporating those elements and considering also the geographical location of the airport will also play an important role. In addition, depending on the ownership of the fuel farms and other fuel supply infrastructure at airports, airport operators also have different degrees of influence over technical adjustments of this infrastructure in view of SAF supply.

2. AIRPORTS INITIATIVES ON SAFS

2.1 Since 2007 the Norwegian airport operator Avinor has, together with the Norwegian aviation industry, been monitoring the development of SAFs closely, commissioned several reports and supported R&D initiatives. In January 2016 Avinor’s Oslo Airport, Airport Carbon Accredited at level 3+, in cooperation with AirBP, Lufthansa Group, KLM and SAS, became the world’s first airport where SAF is available for all airlines. It was also the first time SAF was dropped into the central fuel farm, and distributed in the hydrant and dispenser system. In August 2017, the programme was extended to Avinor’s Bergen Airport. In addition, Avinor has launched an indicative target of 30 % share of SAF from 2030. Finally, the Norwegian Parliament in June 2017 decided a mandatory SAF drop-in requirement of 1% from 2019 which is to be increased to 30% in 2030.

2.2 Swedavia whose ten airports are recognized as carbon neutral under Airport Carbon Accreditation, has also started to supply SAFs in 2016. A total of 450 ton SAF was refuelled at three Swedavia airports: Stockholm Arlanda Airport (ARN), Bromma Stockholm Airport (BMA) and Åre Östersund Airport (OSD) by the end of the year. The amount is equal to the fuel consumption in Swedavia’s own staff business travel, annually. In May 2017, a minor volume was refuelled at Göteborg Landvetter Airport (GOT), and Halmstad Airport (HAD) is now offering SAF.

2.3 The Port of Seattle has strategic goals to get to carbon neutral for their scope 1 emissions, and a goal to reduce scope 3 emissions by 50% in 2020, and 80% by 2050 (below 2007 levels)¹. The scope 3 goal requires SAF, amongst other methods. Seattle-Tacoma Airport (SEA), accredited at level 3 of Airport Carbon Accreditation, has recently completed a study, with Carbon War Room and SkyNRG, along with their airlines, on the question of what U.S. Airports can do in this space. A summary of the report titled “Innovative Funding for Sustainable Aviation Fuel at U.S. Airports” concludes the following:

- While US Airports cannot pay for aviation fuel directly, the Port could pay directly for the “co-benefits” of SAF, though this requires FAA approval. Co-benefits include air quality benefits, GHG reductions, and support of regional economic development. Multiple mechanisms may be necessary to cover the incremental cost of SAF over conventional Jet A, and the most promising include:
 - Corporate support programs in which corporations pay into a fund and can offset the GHG from their travel.
 - Port tax levy, should the Port Commission commit the funds.
 - Use of non-aeronautical revenue, with the approval of FAA
 - Use of revenues as authorized in the Port’s airline leasing and operating agreements (also requires FAA approval).

2.4 San Francisco International Airport (SFO), currently Level 3 Airport Carbon Accredited, accelerated its SAF exploratory work in early 2017 by hosting a series of knowledge development workshops with key stakeholders. This collaboration follows SFO partnering with ASIG and Singapore Airlines on its first SAF demonstration project earlier this year.

2.4.1 SFO also continues outreach to the California Air Resources Board encouraging SAF's inclusion within California's Low Carbon Fuel Standard (LCFS) on an opt-in basis. A key pillar in SFO's strategy, SAF's inclusion in the LCFS will significantly narrow the price gap between conventional aviation fuels (CAF) and SAF, thereby expanding the SAF market in the state. Co-benefits of public health and air quality for ramp workers along with reduced GHG emissions are part of the airport's strategic plan. In early August, SFO held a next-phase SAF scoping workshop in collaborative partnership with nearly 60 stakeholders, including SAF fuel producers, CAF suppliers, and airport fuel providers; state and local government agencies; airport finance, policy, planning and operations personnel; airlines; and various NGOs. SFO will commission a feasibility study, anticipated to be completed in early 2018, with the emerging scope developed by this group, to identify the most viable and lowest carbon intensive feedstocks & fuel supply available to the Airport; review infrastructure, logistics and Airport delivery constraints; prioritize government and NGO partnership opportunities, and analyse the suitability of current and emerging financing alternatives to address cost barriers in the market.

2.5 In addition to airport operators’ initiatives to support the supply of SAFs, some airlines have also taken the lead to support the supply of SAFs to their own fleets at some airports. For instance, this is the case of the United Airlines project at Los Angeles International Airport (LAX).

¹ Scope 1 are also referred to as Direct GHG, and are defined as ‘emissions from sources that are owned or controlled by an organization. Scope 3 are also referred to as Other Indirect GHG, and are defined as ‘emissions that are a consequence of the operations of an organization, but are not directly owned or controlled by an organization’.

3. CONCLUSIONS

3.1 Airports have a strong record of working to limit and reduce their environmental impacts, including engaging with their stakeholders to reduce their own environmental footprint.

3.2 The airports undertaking initiatives to supply SAFs are industry leaders with specific and advanced climate targets and business cases that incorporate both support and a strong coordination with stakeholders and local governments. Additional studies should help the industry to better understand how these initiatives could be extended to other airports.

3.3 The availability of SAFs onsite airports is an element that could facilitate the deployment of SAFs at a commercial scale.

3.4 Caution, however should be used in any assumptions that rely on airports to contribute to the financing of SAFs and the provision of the relevant infrastructure, considering that this would be highly dependent on airport ownership formats, a proper business case established and local subsidies, grants or other incentives available at particular airport locations.

4. ACTION BY THE CAAF2

4.1 The CAAF2 is invited to:

- a) recognize that the airports undertaking initiatives to support the supply of SAFs are industry leaders and that such availability of SAFs onsite airports is an element that could facilitate the deployment of SAFs at a commercial scale;
- b) recognize that airports initiatives on SAFs are highly dependent on airport ownership formats, a proper business case established and local subsidies, grants or other incentives available at particular airports;
- c) support airports that after considering all the aspects involved decide to implement these initiatives; and
- d) support new feasibility studies for the supply of SAFs at airports.

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