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Agenda Item 17: Environmental Protection — International Aviation and Climate Change

HOW AIRPORTS CAN SUPPORT THE DECARBONIZATION OF THE AVIATION ECOSYSTEM – A HOLISTIC APPROACH

(Presented by Airports Council International (ACI))

EXECUTIVE SUMMARY

This information paper supports A41-WP/466 which details the industry's view whereby the adoption of a long-term aspirational goal for international civil aviation is critical to supporting industry action to address its climate impacts and enable it to achieve net-zero carbon emissions by 2050. This paper outlines airports' perspective and the support required for meeting the goal.

Strategic Objectives:	This working paper relates to Strategic Objective – *Environmental Protection*
Financial implications:	N/A
References:	A41-WP/466, *Industry Views on Delivering a Long-term Climate Goal for Aviation* A41-WP/210, *Airports' Efforts to Decarbonize, Required Support and a Collaborative Approach with Governments and Stakeholders*

1. INTRODUCTION

1.1 Climate change is a global challenge requiring further and urgent global response. Taking into consideration the Paris Agreement and the Intergovernmental Panel on Climate Change (IPCC) Special Report (2018), and thus the urgency in defining a path forward to net-zero carbon emissions, ACI member airports at a global level committed to reach net-zero carbon emissions by 2050 and urged governments to provide the necessary support in this endeavour. Agreed in June 2021, it is the first worldwide net-zero aviation-sector commitment and is based on a comprehensive long-term goal feasibility assessment.

1.2 The goal is limited to carbon emissions for which the airport operator is directly or indirectly responsible, referred to as scope 1 and scope 2 emissions; however, airports are also committed to facilitate the decarbonisation of all aviation-related emissions. Indeed, ACI is part of the aviation industry commitment to net-zero by 2050 under the Air Transport Action Group (ATAG). ACI fully supports the ambitious ICAO long-term aspirational goal (LTAG) (i.e. net-zero by 2050) to be agreed at this Assembly. Both goals are aligned with the Paris Agreement.

1.3 Airport operators' decarbonisation and their support for the decarbonisation of aviation emissions are different but complementary and recognise the interdependent roles airports can play. This is also a reality for the other aviation stakeholders. In fact, the entire aviation ecosystem is interdependent and also needs collaboration and support from governments, aviation and non-aviation stakeholders to achieve net-zero by 2050.

2. DISCUSSION

2.1 The greatest source of carbon emissions of airport operators is the energy used to power terminals and ground support equipment (GSE). Therefore, the decarbonisation of the electricity grid will be an essential component for airports to reach net-zero carbon emissions by 2050, but there are also benefits to other aviation stakeholders from accelerating the electricity grid decarbonisation.

2.2 Renewables are also needed for the development of sustainable aviation fuels (SAF), green hydrogen and green electrification of GSE and vehicles, and aircraft. In this regard, the industry will be increasingly dependent on governments' renewable energy policies as the sector and the economy transition to more sustainable sources of energy.

2.3 Without sustainable sources of energy, such as SAF or hydrogen, the reduction of aviation emissions will be very limited. Understanding and addressing this level of interdependence among different sources of energy is critical to achieve success at the global level. In addition, the energy transition could require airports to accommodate operations with different sustainable energy sources at the same time, e.g., different blends and types of SAF (hydrogen, electric). Assessments of how this could be accommodated by airports are encouraged.

2.4 The availability and provision of sustainable sources of energy are strategic issues for States and the global economy. The energy transition will happen unevenly across the globe, and green energy could remain a scarce resource for many. Therefore, States should cooperate and consider all aviation stakeholders for the development of policies to provide incentives, certainty of demand and supply, and flexibility to reassess progress and accommodate changes as needed. Moreover, they also need to develop mechanisms which could accelerate the deployment of sustainable sources of energy for aviation globally, such as power purchase agreements (PPAs), and book and claim systems which could be used among stakeholders from different States.

2.5 In jurisdictions where airports are given the opportunity or have direct responsibility or ownership over the airside operations, airports can and are encouraged to reduce aviation emissions from ground operation. Actions such as reducing taxing times, ensuring better sequencing of aircrafts, reducing the use of aircraft auxiliary power units (APUs) at the gate by providing ground power for aircraft, or providing charging stations for electric GSE will all help in this effort. The implementation of data sharing capabilities, such as airport collaborative decision-making (A-CDM) can improve the overall efficiency and predictability of the ground operation and facilitate emissions reductions. ACI Europe's *Guidance on Airports' Contribution to Net Zero Aviation* focuses on the reduction of airports' scope 3 emissions and the support for the implementation of Destination 2050.

2.6 In some cases, airports can facilitate the availability of SAF onsite through partnerships or operational agreements with stakeholders. Airports are also embracing technology and innovation, including working to accommodate new emerging technologies in the aviation market and innovative propulsion systems, to drive and enable broader transformation of the aviation ecosystem. There are operational and infrastructure adaptations to be addressed if these solutions are to materialize.

2.7 There should be level of consistency across different State policies to avoid unintended impacts as uncoordinated initiatives will risk their ability of success and potentially limit the number of stakeholders benefiting from them. Mechanisms should be in place to ensure book and claim alternatives are available and that they are as important as focusing on the production, supply, and demand of SAF.

2.8 The cooperation of aviation stakeholders to achieve net-zero is critical, particularly considering the challenges associated with the decarbonisation of aviation emissions. For instance, there is a large number of stakeholders who need to be engaged and familiarized with the technical and regulatory incentives and requirements associated with SAF or hydrogen to ensure its availability and operability at airports. Collaboration and support across government and aviation and non-aviation stakeholders is crucial to ensuring the availability of sufficient volumes of renewable energy to cater to forecasted demand.

2.9 Capacity building and access to finance are equally key considerations and should be used to support an inclusive transition to net-zero by providing opportunities for both developing and developed States, organizations, and aviation and non-aviation stakeholders to thrive.

2.10 A balanced approach which recognizes both the interdependencies among aviation stakeholders and the complementary nature among them on the transition to net-zero is the way forward. Such an approach will enable all actors to address different needs, drivers, and opportunities, while dealing with a diverse level of maturity in terms of technology advancement and access to capacity building and finance. Flexibility will also be needed as these changes will take place unevenly in different regions across the globe.

3. CONCLUSION

3.1 The challenge to decarbonise aviation is significant, but aviation stakeholders have committed to and are taking action to decarbonise. Support from governments and collaboration with all stakeholders will be essential for them to have access to sustainable sources of energy, finance, and capacity building. Collaboration across government, aviation and non-aviation stakeholders will act as a catalyst for positive impact by providing mutual benefits to all stakeholders. Climate change is a global challenge, requiring a common framework to support the decarbonisation of the aviation industry.

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