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ASSEMBLY — 38TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection

AIRPORT CARBON EMISSIONS MANAGEMENT

(Presented by the Airports Council International)

EXECUTIVE SUMMARY

ACI has two initiatives to assist its member airports with the management of carbon emissions associated with airport and airport-related activities.

Airport Carbon Accreditation is a scheme to assess the progress of airports in managing their greenhouse gas emissions and recognise different levels of achievement. It is now available to airports in the European, Asia-Pacific and African regions. After four years of operation, Airport Carbon Accreditation has 90 airports certified across Europe, Asia-Pacific and Africa.

The *Airport Carbon and Emissions Reporting Tool (ACERT)* was developed with Transport Canada to help airports produce their own carbon emissions inventories. It does not require environmental or emissions expertise but is sufficiently accurate to allow an airport to track its emissions and develop and implement a mitigation plan. It is particularly useful for smaller airports. ACERT has been approved for use in *Airport Carbon Accreditation*.

Strategic Objectives:	This working paper relates to Strategic Objective C – *Environmental Protection and Sustainable Development of Air Transport*.
Financial implications:	No additional resources required.
References:	N/A

1. INTRODUCTION

1.1 ACI has two initiatives to assist its airport members with the management of carbon emissions associated with the airport and airport-related activities.

2. AIRPORT CARBON ACCREDITATION

2.1 In June 2008, ACI EUROPE adopted a Resolution whereby its member airports committed to reduce their carbon emissions, with the ultimate goal of becoming carbon neutral. This Resolution also committed ACI EUROPE to the development, within a year, of a common framework for the measurement, reporting and reduction of carbon emissions, with the possibility of becoming carbon neutral. The catalyst for the programme's development lay in the aero-political environment in Europe, which led ACI EUROPE and its members to take a strategic view of their activities and identify key emerging issues. This review made clear that greenhouse gas emissions from aviation were considered as a fast-growing contributor to climate change. As a result, ACI EUROPE took a close look at their member airports' operational activities and worked with members, key institutional aviation bodies, and the environment community to develop *Airport Carbon Accreditation*.

2.2 In June 2009, *Airport Carbon Accreditation* was launched in Europe, thus becoming the first ever carbon mapping and carbon management standard specifically designed for the airport industry. As airport operators are not all at the same stage on the journey to carbon neutrality, the programme has four ascending levels of accreditation: "Mapping" (Level 1); "Reduction" (Level 2); "Optimisation" (Level 3); and, "Neutrality" (Level 4). *Airport Carbon Accreditation* is a voluntary programme based on internationally acknowledged standards (Greenhouse Gas Protocol), adapted to the operational realities of an airport. To date, 77 airports have been accredited in Europe, including 14 airports at the highest level "Neutrality".

2.3 In November 2011, ACI ASIA-PACIFIC endorsed *Airport Carbon Accreditation*, thus marking the beginning of accreditations outside Europe. To date, 12 airports have been accredited in the Asia-Pacific region at:

— Level 1 "Mapping": Abu Dhabi Airport, UAE; Mumbai Airport, India; Singapore Changi, Singapore; Sunshine Coast, Adelaide; Parafield Airports, Australia; Queen Alia Airport, Jordan and Suvarnabhumi Airport, Thailand;

— Level 2 "Reduction": Bangalore and Delhi Airports, India; and at

— Level 3 "Optimisation": Hong Kong Airport, SAR China; and, Hyderabad Airport, India.

2.4 In June 2013, ACI AFRICA joined the programme and Tunis Enfidha Airport has already joined at Level 1.

2.5 The benefits of *Airport Carbon Accreditation* have been identified by accredited airports as: clear understanding of emissions sources and boundaries of the airport activities; support of business case for carbon emissions reduction initiatives; promotion of dialogue between the various departments on issues related to carbon; improved airport performance through carbon management; achievement of real and verified emissions reductions giving further credibility to the industry; clear case for movement beyond compliance towards a strategic approach and comprehensive approach to carbon management.

There are additional identified benefits and full details can be obtained at the website http://www.airportcarbonaccreditation.org/. The application of this approach to the airport industry means that it is possible to track the carbon performance of accredited airports. Thus, from May 2012 until May 2013, European Airports saw a reduction of 140,000 tonnes of CO_2 from their main emissions. Currently there is no aggregate data for Asia-Pacific, because at the time of reporting, only one airport from the region was accredited at Level 2 "Reduction".

2.6 Robust governance of the programme has been a key element to its success. *Airport Carbon Accreditation* is owned by ACI EUROPE and administered on its behalf by an external company, WSP Environment & Energy. The administrator is responsible for registration, membership processing, label issuance and other related membership services. *Airport Carbon Accreditation* is supervised by ACI EUROPE supported by an independent Advisory Board, composed of representatives of international institutions and academics. The Advisory Board meets twice each year to monitor the functioning and development of the programme. It also considers the Annual Report, prepared by the Administrator. The full list of Advisory Board members can also be found on the *Airport Carbon Accreditation* website.

3. AIRPORT CARBON AND EMISSIONS REPORTING TOOL

3.1 ACI has worked with the Canadian Department of Transport to develop the *Airport Carbon and Emissions Reporting Tool (ACERT)*. This tool is a self-contained Excel spread sheet that enables an airport operator to calculate its own greenhouse gas (GHG) emissions inventory. *ACERT* is available at no charge to airports and can be used by non-experts by inputting readily available operational data.

3.2 *ACERT* was initially developed for small airports . During development, *ACERT* results for Scope 1 and 2 emissions (i.e., those under the direct ownership or control of the airport operator) were demonstrated to be within 5% to 10% of more rigorous inventories conducted for medium and large airports, though not necessarily for all emissions sources. Accordingly the application of *ACERT* may, in some circumstances, be extended to larger airports.

3.3 Input for *ACERT* may be done by operations, planning or maintenance staff with no emissions training or expertise, and for the calendar year of the inventory, the following information is needed:

— total aircraft, passenger and cargo movements;

— fuel use by airport and tenant vehicles, buildings, emergency generators and fire training;

— electricity (and heat) purchased by the airport operator and tenants;

— aircraft movements categorised either by specific aircraft type or by generic aircraft type, or total fuel dispensed to aircraft;

— aircraft taxi and auxiliary power unit usage times and engine run-ups;

— glycol de-icer use; and

— either a detailed landside traffic study or estimates of passenger and staff ground access (e.g., use of public transport and car, taxi, bus and train activity).

3.4 The software then generates an inventory report including a summary table of GHG emissions and associated pie charts. This stand-alone report also contains detailed notes on the assumptions and caveats and provides a check-list to aid review. The inventory produced is of sufficient quality to help an airport identify energy saving initiatives and establish a GHG reduction program. *ACERT* (v2.0) is available for free from the ACI website http://www.aci.aero/About-ACI/Priorities/Environment/ACERT.

3.5 While *Airport Carbon Accreditation* does not impose a specific mapping model, it has been recognised that ACERT could satisfy the mapping requirements of Airport Carbon Accreditation at Level 1 ("Mapping") and Level 2 ("Reduction") of the programme.

4. CONCLUSION

4.1 Airports recognise their responsibilities in reducing carbon emissions and a key starting point is measuring and quantifying those emissions. Both *Airport Carbon Accreditation* and *ACERT* do this: Airport Carbon Accreditation also recognises the different degrees of activity with four ascending levels of accreditation: "Mapping" (Level 1); "Reduction" (Level 2); "Optimisation" (Level 3); and, "Neutrality" (Level 4).

4.2 ACI encourages States to support these methodologies and welcomes enquiries from entities seeking further information.

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