DIRECTORS GENERAL OF CIVIL AVIATION-MIDDLE EAST REGION

Third Meeting (DGCA-MID/3)
(Doha, Qatar, 27-29 April 2015)

Agenda Item 7: **Environmental Protection**

CO2 EMISSIONS ACTIVITIES

(Presented by Airports Council International)

SUMMARY

ACI adopts a two-pronged approach to assisting airports in reducing greenhouse gas emissions such as carbon dioxide. The first consists of the provision of guidance materials and training, e.g. the Airport Greenhouse Gas Emissions Management handbook and the Airport Carbon Management training course. The second involves the provision of a simple do-it-yourself tool for the estimation of airport carbon emissions (ACERT) and, for airports which want to obtain international recognition of their achievements in carbon management, a programme to provide third-party accreditation (*Airport Carbon Accreditation*) of carbon dioxide emissions and reduction. This paper explains the purposes, methodologies and the benefits of ACERT and *Airport Carbon Accreditation*.

1. **INTRODUCTION**

1.1   In 2007, ACI's Annual Assembly passed a resolution that encourages member airports to commit to strategies to reduce carbon emissions, with the ultimate target of becoming carbon neutral. ACI adopts a two-pronged approach to assisting airports in reducing greenhouse gas emissions such as carbon dioxide. The first consists of the provision of guidance materials and training, e.g. the Airport Greenhouse Gas Emissions Management handbook and the Airport Carbon Management training course.

1.2   The other element consists of the provision of practical tools to assist its airport members with measuring carbon emissions and gaining international recognition in their efforts in reducing and managing their carbon footprint. The first is a simple do-it-yourself tool, Airport Carbon and Emissions Reporting Tool (ACERT) aimed at assisting airports with estimating their carbon footprint. The second is a third-party accreditation programme, (*Airport Carbon Accreditation*). This paper explains their history, purposes, methodology and benefits.

2.   DISCUSSION

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. Within a year, 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.

2.2   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), carbon footprint measurement; "Reduction" (Level 2), carbon management towards a reduced carbon footprint; "Optimisation" (Level 3), level 2 and stakeholder engagement; and, "Neutrality" (Level 3+), neutralising remaining direct carbon emissions by offsetting. *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, 90 airports have been accredited in Europe.

2.3   In November 2011, ACI ASIA-PACIFIC endorsed *Airport Carbon Accreditation*, thus marking the beginning of accreditations outside Europe. To date, 24 airports are accredited in the Asia-Pacific and the Middle East regions at:

> o Level 1 "Mapping": Brisbane and Sydney Airports, Australia; **Abu Dhabi, Dubai, Al Maktoum and Sharjah Airport, UAE**; Soekarno-Hatta, Indonesia; **Queen Alia Airport, Jordan**, Chiang Mai, Chiang Rai, Don Mueang, Hat Yai Airports, Thailand;
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> o Level 2 "Reduction": Adelaide, Parafield and Sunshine Coast Airport, Australia; Macau Airport, China; Mumbai Airport, India; Kaohsiung Airport, Chinese Taipei and Suvarnabhumi Airport, Thailand; and
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> o Level 3 "Optimisation": Hong Kong Airport, China; Bangalore, Delhi and Hyderabad Airports, India and Incheon Airport, Republic of Korea.

2.4   In June 2013, September 2014 and November 2014 the programme was extended to Africa, North America and Latin America-Caribbean contributing to the overall total of 119 accredited airports in the World.

2.5   Robust governance of the programme has been a key element to its success. *Airport Carbon Accreditation* is owned and supervised by ACI EUROPE and administered on its behalf by an external company, WSP UK. The administrator is responsible for registration, membership processing, label issuance and other related membership services. *Airport Carbon Accreditation* is overseen by an independent Advisory Board, composed of representatives of international institutions and academics, to ensure the impartial 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:
http://www.airportcarbonaccreditation.org.

2.6   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.

2.7   The application of this approach to the airport industry means that it is possible to track the carbon management performance of accredited airports. Thus, from May 2013 until May 2014, European Airports saw a reduction of 130,000 tonnes of CO_2 and Asia-Pacific Airports achieved 2,000 tonnes of CO_2 reduction. Because of its proven capability as a tool to reduce carbon footprints of aerodrome operators, *Airport Carbon Accreditation* has been included in the States Action Plan to Reduce Carbon Emissions in Aviation for many Member States of the European Union, e.g. France, Germany and United Kingdom. In fact *Airport Carbon Accreditation* has been included in ICAO's Guidance Material for the Development of States' Action Plans as example of measures implemented for emission reduction.

Airport Carbon and Emissions Reporting Tool

2.8   ACI has worked with the Transport Canada 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 easily available operational data.

2.9   ACERT was initially developed for small airports that did not have the resources to establish their carbon inventory independently. This tool is equally useful for some larger airports.

2.10   Input for ACERT may be done by operations, planning or maintenance staff with no special training or expertise in carbon management, and for the calendar year of the inventory, the following information is needed:

> o total aircraft, passenger and cargo movements;
> o fuel use by airport and tenant vehicles, buildings, emergency generators and fire training;
> o electricity and heat purchased by the airport operator and tenants;
> o aircraft movements categorised either by aircraft type, or total fuel dispensed to aircraft;
> o aircraft taxi and auxiliary power unit usage times and engine run-ups;
> o glycol de-icer use; and
> o 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).

2.11   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 at http://www.aci.aero/About-ACI/Priorities/Environment/ACERT

2.12   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.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to note the importance of *Airport Carbon Accreditation* and ACERT as tools to assist airports in managing and reducing carbon emissions.

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