



ICAO

International Civil Aviation Organization
North American, Central American and Caribbean Office

WORKING PAPER

NACC/DCA/11 — WP/45
09/06/23

**Eleventh North American, Central American and Caribbean Directors of Civil Aviation Meeting
(NACC/DCA/11)**

Varadero, Cuba, 28-30 June 2023

Agenda Item 7: Promotion and Implementation of Regional Actions for Environmental Protection

ACI'S APPROACH TO AIRPORTS DECARBONIZATION

(Presented by ACI-LAC)

EXECUTIVE SUMMARY

The United Nations Intergovernmental Panel on Climate Change Reports in 2022 warned further delay in global climate action will miss the rapidly closing window to secure a livable future. In view of this, the aviation industry should step up its efforts to combat against climate change. This paper provides an update on ACI-LAC's contributions to the reduction in CO₂ emissions at airports, mainly by urging airport members to make commitments to the Long-Term Carbon Goal and providing carbon management best practices document and tools such as *Airport Carbon Accreditation* and Airport Carbon and Emissions Reporting Tool (ACERT).

1. INTRODUCTION

- 1.1 In light of the most recent United Nations Intergovernmental Panel on Climate Change (IPCC) Special Report¹ on Global Warming of 1.5°C and with the imminent entry into force of the Paris Agreement², the aviation industry should step up its efforts in the combat against climate change.
- 1.2 The latest IPCC reports published in August 2021, February 2022 and April 2022 reaffirmed that climate change is already affecting every region on Earth, threatening human wellbeing and the health of the planet. The fossil fuel infrastructures that are underway will cause the world to surpass the 1.5°C thresholds. Any further delay in concerted global action will miss a brief, rapidly closing window to secure a livable future.

¹ The Special Report on Global Warming released by the United Nations Intergovernmental Panel on Climate Change (IPCC) on 8 October 2018 indicated that limiting global temperature rise of this century below 1.5 degrees Celsius is indispensable to limit the most catastrophic and irreversible consequences of global warming. This will require urgent and drastic action through unprecedented and deep emissions reductions in all sectors to ensure global emissions decline by -45% by 2030 and reach net zero by 2050.

² In December 2015, at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP-21) in Paris, more than 190 member states had committed and signed the Paris Agreement, which aimed to keep global temperature rise of this century below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

- 1.3 In response, 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. It was the first net zero commitment made in June 2021 at the global level in the aviation sector which was based on a comprehensive long-term goal feasibility assessment.
- 1.4 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, but airports are also committed to facilitate the decarbonization of aviation emissions. ACI fully supports an ambitious ICAO LTAG goal as agreed at 41st Assembly.
- 1.5 The ACI long term goal feasibility study considered regional differences in order to set a common global goal with an understanding that pathways are expected to vary according to the region, the level of maturity of some technology developments, drivers, business cases, opportunities and challenges, particularly the grid decarbonization. The acknowledgement that different decarbonizations pathways were part of the solution to achieve a common global goal was one of the enabling elements to reach consensus. The steps to Net Zero Carbon emissions will require shared policies and collaboration with industry, government and other stakeholders.

2 DISCUSSION

Collaboration with Governments

- 2.1 ACI-LAC is committed to achieving net zero carbon emissions and develop action plans to meet this commitment, and embed low carbon, resource efficient technologies into new and existing operations and infrastructure; and urging governments' support to decarbonize the electricity grid and facilitate renewable energy transition at airports.
- 2.2 The greatest source of carbon emissions of airport operators is the energy used to power terminals and equipment. Therefore, the decarbonization of the electricity grid, which the airports have a limited ability to change, will be an essential component of the likelihood of them reaching Net Zero carbon emissions by 2050. Renewables are also needed for the development of Sustainable Aviation Fuel (SAF), green hydrogen and green electrification of aircraft and ground support equipment and vehicles.
- 2.3 Effective action to achieve sustainable development goals will depend on the ability of airports to integrate sustainability as the core of their corporate strategies. The multi-sector collaboration will play a critical role in ensuring a resilient aviation ecosystem that is capable of achieving global sustainability goals. There is an ever-increasing pressure on airports and other aviation stakeholders to deliver sustainability so as to attract and grant finance. Sharing climate related risks is becoming a condition for investment. This requires a combination of efforts which align mitigation and adaptation initiatives to ensure a sustainable and resilient aviation ecosystem.

- 2.4 To meet future air passenger demand in LAC, investments in new greenfield airports, as well as significant investments to expand and maintain existing airport infrastructure, will be required. Between 2021 and 2040, projections indicate approximately USD 93.5 billion in airport total capital investments will be needed to address the long-term trend in passenger demand. Of this amount, 44 per cent of the CAPEX needs are for new greenfield airport construction, representing USD 41 billion between 2021 and 2040. The imperious need to address the capital expenditure need and decarbonization challenges shall be recognized to ensure the economically and environmentally sustainable development of airports.

Airport Carbon Accreditation - Updates

- 2.5 Airport Carbon Accreditation was the first ever carbon mapping and carbon management standard specifically designed for the airport industry. Independent third-party verification by an approved verifier is an essential component of the program. Airports can participate at one of the four progressively stringent levels of accreditation: 1. Mapping; 2. Reduction; 3. Optimisation; and 4. Transformation. In addition, airports at Level 3 and 4 can choose to offset their residual emissions, thereby achieving Level 3+ (Neutrality) and Level 4+ (Transition) respectively.
- 2.6 Participation in *Airport Carbon Accreditation* is entirely voluntary. The institutionally endorsed program is governed by an advisory board independent of ACI to ensure its credibility and global standard. The accounting method to measure carbon dioxide emissions are based on the internationally accepted Greenhouse Gas Protocol.
- 2.7 The number of the participants in *Airport Carbon Accreditation* program has been consistently increasing despite the pandemic on account of the program's ability to help airports to reduce carbon footprints and gain public recognition. To date, 400 airports worldwide including 71 in Latin America and the Caribbean have been accredited. These 71 airports, listed in the **Appendix**, handle 47% of the air passenger traffic in Latin America and the Caribbean.
- 2.8 *Airport Carbon Accreditation* enables the industry to track the carbon management performance of accredited airports. From May 2019 to May 2021, airports participating in the program worldwide achieved a reduction of 347,718 tonnes of CO₂ compared to the previous year on the basis of a 3-year-rolling average. Of these reductions, 73,523 tonnes were contributed by Asia-Pacific and the Middle East Airports. Because of its proven capability as a tool to reduce the carbon footprints of aerodrome operators, *Airport Carbon Accreditation* has been referenced in the States Action Plan to Reduce Carbon Emissions in Aviation by many Member States in Europe and Asia, e.g., Australia, Demand, France, Germany, India, Indonesia, Norway, Sweden, Switzerland and United Kingdom, etc.
- 2.9 In the last few years, the program has seen numerous improvements such as providing updated guidance documents on CO₂ offsetting for airports and case studies on carbon reduction, to improve transparency; the *Airport Carbon Accreditation* application manual and a short guide to *Airport Carbon Accreditation* were made public and available for download through the *Airport Carbon Accreditation* [website](#). In November 2020, two new accreditation levels – Level 4 (Transformation) and Level 4+ (Transition) – were launched, bringing the program in line with the latest scientific and policy developments. To enhance the collective spirit of the program, a

mentorship initiative was launched in early 2021, whereby airports volunteer to utilise their know-how and experience in carbon management to aid their peers, helping to remove entry-level barriers through knowledge and best practice sharing with new entrant airports lacking necessary resources to enter the program or to progress through higher levels.

Airport Carbon and Emissions Reporting Tool – Updates

- 2.10 The Airport Carbon and Emissions Reporting Tool (ACERT) is a self-contained Excel spreadsheet that helps an airport operator to calculate its own greenhouse gas (GHG) emissions. It is available at no charge to airports and can be used by non-experts by inputting easily available operational data. ACERT is currently available in version 6 from the ACI website at <https://store.aci.aero/form/acert/>.
- 2.11 While *Airport Carbon Accreditation* does not specifically require a carbon calculation model, it accepts the current version of ACERT (v6) as a tool for reporting carbon emissions. Since November 2018, it has had 1,062 unique downloads. Currently, there are 84 airports using ACERT as carbon footprint calculation tool to fulfil *Airport Carbon Accreditation* requirement.

3 ACTION

- 3.1 Given the synergy and effectiveness of the Airport Carbon Accreditation program in empowering airports to reduce their carbon emissions in alignment with global climate goals, the Conference is invited to:
- a) Recognize the efforts and contributions of airports in Asia-Pacific in combating climate change; and
 - b) Encourage their aerodrome operators to adopt ACERT and voluntarily participate in *Airport Carbon Accreditation*; and
 - c) Encourage States/Administrations interested in including supplemental benefits within their State Action Plans to consider using the *Airport Carbon Accreditation*; and
 - d) Support airport operators to implement their decarbonization strategies

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APPENDIX

Current Level	Country	Airport	
Mapping	1	Mexico	Acapulco Airport
	1	Argentina	Aeroparque Jorge Newbery
	1	Brazil	Aeroporto Internacional de Florianópolis Hercílio Luz
	1	Mexico	Chihuahua Airport
	1	Mexico	Ciudad Juarez
	1	Mexico	Culiacan
	1	Curaçao	Curaçao Airport (Hato)
	1	Mexico	Durango
	1	Jamaica	Kingston Airport
	1	Peru	Lima Jorge Chavez
	1	Bahamas	Lynden Pindling International Airport
	1	Brazil	Macaé Airport
	1	Mexico	Manzanillo
	1	Martinique	Martinique Aimé Césaire International
	1	Mexico	Mazatlan
	1	Mexico	Mexicali Airport
	1	Mexico	Monterrey
	1	Mexico	Morelia Airport
	1	Mexico	Reynisa
	1	Mexico	San Luis Potosi
1	Brazil	Santos Dumont Airport	
1	Mexico	Tampico	
1	Mexico	Torreon	
1	Brazil	Vitoria International Airport	
1	Mexico	Zacatecas	
1	Mexico	Zihuatanejo	
1	Puerto Rico	San Juan	
Reduction	2	Uruguay	Aeropuerto Internacional de Carrasco
	2	Mexico	Aeropuerto Internacional de Minatitlán
	2	Colombia	Aeropuerto Internacional El Dorado
	2	Mexico	Bahías de Huatulco International Airport
	2	Brazil	Belo Horizonte Tancredo Neves-Confins International Airport
	2	Brazil	Brasilia
	2	Mexico	Cancun International Airport
	2	Peru	Capitán FAP Renán Elías Olivera (Pisco)
	2	French Guiana	Cayenne Airport (Caen)
	2	Mexico	Cozumel International Airport
	2	Costa Rica	Daniel Oduber Quirós International Airport

Optimisation	2	Guadeloupe	Guadeloupe-Pôle Caraïbes
	2	Mexico	Guanajuato (Del Bajío)
	2	Mexico	Hermosillo
	2	Mexico	La Paz
	2	Mexico	Los Cabos
	2	Mexico	Los Mochis
	2	Mexico	Mérida International Airport
	2	Jamaica	Montego Bay Jamaica Airport
	2	Mexico	Oaxaca International Airport
	2	Mexico	Queretaro Intercontinental Airport
	2	Brazil	Rio de Janeiro International Airport/Galeão Antonio Carlos Jobim
	2	Costa Rica	San Jose Juan Santamaria (Costa Rica)
	2	Chile	Santiago Arturo Merino Benitez International Airport
	2	Mexico	Tapachula International Airport
	2	Mexico	Tijuana
	2	Mexico	Veracruz International Airport
	2	Mexico	Villahermosa International Airport
Optimisation	3	Ecuador	Aeropuerto Internacional Jose Joaquín Olmedo de Guayaquil
	3	Mexico	Aguascalientes
	3	Dominican Republic	Arroyo Barril
	3	Saint Martin (French Part)	Grand Case-L'Espérance
	3	Mexico	Guadalajara
	3	Dominican Republic	La Isabela International
	3	Dominican Republic	Maria Montez Airport
	3	Dominican Republic	Puerto Plata
	3	Mexico	Puerto Vallarta
	3	Aruba	Queen Beatrix International Airport
	3	Brazil	Salvador Bahia International
	3	Dominican Republic	Samaná El Catey International
3	Dominican Republic	Santo Domingo	
Neutrality	3+	Dominican Republic	Cibao International
	3+	Ecuador	Galapagos Baltra Airport
	3+	Ecuador	Quito - Mariscal Sucre International