ICAO CAPACITY BUILDING SEMINAR ON LOW EMISSIONS AVIATION MEASURES

Transforming the global aviation sector: Emissions Reductions from International Aviation

Jane Hupe, Deputy Director Environment, ICAO

Introduction

- State Action Plan
- ICAO-UNDP-GEF project
- Project is comprised of four components

Component 1 of the project

1 IMPLEMENTING AVIATION LOW EMISSIONS MEASURES: COSTS AND ENVIRONMENTAL BENEFITS ASSESSMENT

A marginal abatement costs (MAC) curve has been developed to assess **the costs and benefits** associated with the implementation of the aviation low emissions measures in developing States and SIDS.

ICAO REPORT ON COSTS AND ENVIRONMENTAL BENEFITS (MAC CURVE ANALYSIS)

1. To support developing States and SIDS to obtain the necessary information on the financial costs and CO_2 emissions reduction benefits associated with the basket of mitigation measures selected in their State Action Plan
2. To provide technical support and practical guidance to developing States and SIDS to enable them to identify feasible emissions reduction measures
3. To make informed decisions relating to the implementation of CO_2 mitigation measures

Component 2 of the project

2 DEVELOPMENT OF 4 GUIDANCE DOCUMENTS TO FACILITATION LOW EMISSIONS AVIATION IN DEVELOPING STATES AND SIDS

Enhancing States' **policy framework** and **strengthening their national capacities** through a series of guidance documents.

4 UNIQUE GUIDANCE MATERIALS FOR ICAO MEMBER STATES:

1. Renewable Energy for Aviation: Practical Applications to Achieve Carbon Reductions and Cost Savings
2. Financing Aviation Emissions Reductions
3. Regulatory and Organizational Framework to Address Aviation Emissions
4. Sustainable Aviation Fuels Guide

Component 3 of the project

3 ICAO INTEGRATED ENVIRONMENTAL TECHNICAL PLATFORM

A platform to support the implementation of low emissions measures in the aviation sector.

Sharing knowledge and resources, as well as other **outreach** initiatives through an integrated **environmental technical platform**.

LOW-CARBON AVIATION KNOWLEDGE-SHARING PLATFORM

This interactive "Low-carbon Aviation Knowledge-sharing Platform" provides informative resources and ICAO tools, as well as relevant guidance documents on aviation and environment to ICAO Member States. It will be accessible through the ICAO public website.

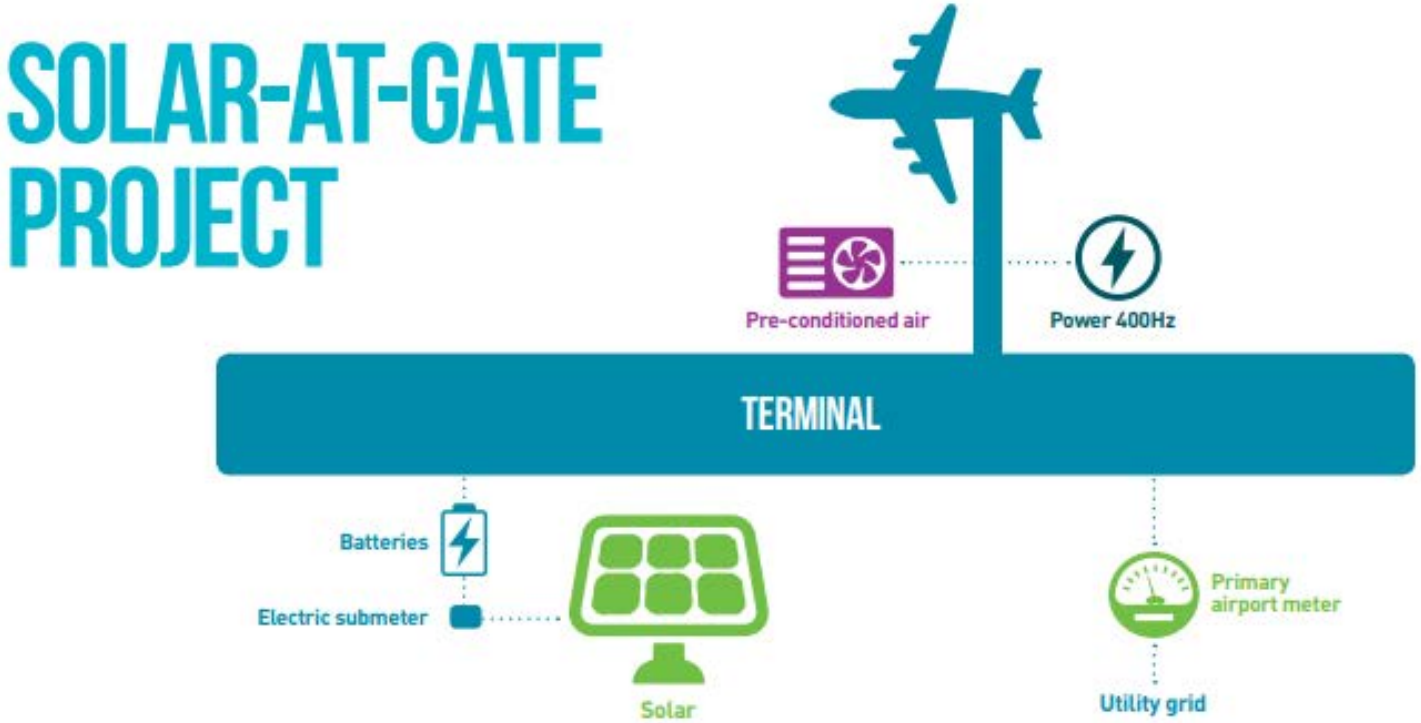
Component 4 of the project

4 PILOT PROJECT ON AVIATION LOW EMISSIONS MEASURES

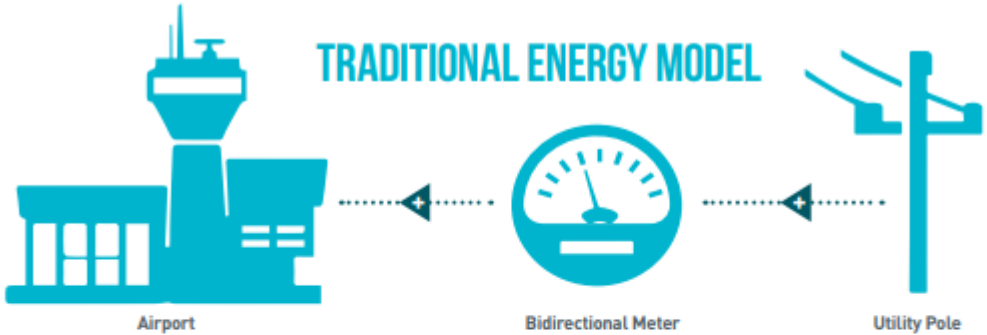
Implementation of a pilot project for emissions reduction in Jamaica

1. Installation of gate electrification equipment with energy supplied by solar power to replace jet fuel-powered Auxiliary Power Units (APUs) and diesel-fueled Ground Power Units (GPU) at two international airports in Jamaica
2. Facilitate the replicability of this solar technology at airports, thus equipping developing States and SIDS with tools to carry out similar projects

The Pilot Project in Jamaica (1/3)



The Pilot Project in Jamaica (2/3)



Excess energy not used by airport that goes back to the grid

Energy used by airport from the grid or battery

The Pilot Project in Jamaica (3/3)

REPLICABLE PILOT PROJECT

- The "solar-at-gate" pilot project is easily replicable
- Through this pilot project, direct emissions reductions at the gate are demonstrated and documented
- The electrical gate units are retrofitted to existing jet bridges and the solar power system can be located on available airport-secured lands
- Documentation related to the pilot project will be shared with all ICAO Member States
- All States can implement similar projects using a variety of possible financing mechanisms, including through their own GEF national allocation

- A project combining solar and electric gate power is a unique solution
- The replacement of carbon intensive electricity from the use of jet fuel-powered APUs and diesel-fueled GPUs with a gate electrification retrofit project powered by solar energy is an effective, measurable and easily replicable way to reduce emissions

Summary

1. Marginal Abatement Cost (MAC) curve
2. Four unique publications

3. An online platform to enable knowledge-sharing
4. A pilot project for "*solar-at-gate*" at Kingston International Airport and a gate electrification project at Montego Bay International Airport.

ICAO

THANK YOU