ICAO PRE-COLLOQUIUM TUTORIAL — PROGRAMME
Tuesday, 11 May 2010

Registration times:
MONDAY, 10 May 1500 – 1700, TUESDAY, 11 May 0800 – 1000 and 1400 – 1700,
WEDNESDAY, 12 May 0800 – 1000

Please note that the pre-Colloquium tutorial is available free of charge and
is only accessible to participants of the Colloquium.

The tutorial preceding the Environmental Colloquium will provide a broad overview of
aviation greenhouse gas emissions (GHG) to familiarize participants with the
vocabulary and concepts used in the description, measurement, regulation, and
management of aviation GHG emissions.

Presented by Michael A. Kenney, Director KB Environmental Sciences. Inc.

09:00 – 10:30 SESSION ONE — AIRCRAFT EMISSIONS AND THEIR
IMPACT ON CLIMATE

With the emphasis on aviation, this session will provide the participants
with a working knowledge of GHGs, how they are formed, and their
importance to the environment.

A. Important terms and concepts, including:
   ▶ Adaptation
   ▶ Carbon cycle
   ▶ Carbon footprint
   ▶ Climate change
   ▶ Greenhouse effect / Global warming
   ▶ Greenhouse gases
   ▶ Lifecycle impacts
   ▶ Sustainability
SESSION ONE (continued)

B. GHG molecules — What are they and how are they transformed from well-to-wake
- Fundamentals of fuel combustion
- Greenhouse warming potential

C. Aviation sources of GHGs
- Aircraft
- GSE/APU
- Surface vehicles

10:30 – 11:00 COFFEE BREAK

SESSION TWO — GHG DATA COLLECTION: MEASURING, REPORTING AND VERIFYING

THE ASSESSMENT

This session will provide participants with an understanding of how aviation-related GHGs are calculated and their overall importance to the climate change issue.

A. Interactive participant review of Session One

B. GHG metrics, measurement methods and trends
- Worldwide and aviation’s contribution
- Intergovernmental Panel on Climate Change (IPCC)
### SESSION TWO (continued)

**Co-presented by Ted Thrasher, ICAO Environmental Officer**

**C. Emission quantification methods**
- GHG emissions inventories
- Guidelines and protocols
- Ownership, boundaries and scopes
- Direct and indirect emissions

**D. Reporting venues and criteria**
- International
- National
- Voluntary

### 13:00 — 14:00

**LUNCH BREAK**

### 14:00 — 15:30

**SESSION THREE — MITIGATION MEASURES FOR AVIATION EMISSIONS**

**THE REDUCTIONS**

This session will provide participants with a practical overview of technological, design, planning and other alternative measures for reducing aviation’s carbon footprint.

**A. Aircraft emission reduction measures**
- Operational strategies
- Aircraft design
- Alternative fuels

**B. Other aviation-related sources**
(GSE, APUs, surface vehicles, stationary sources, electrical use)

**C. Credits and offsets**

### 15:30 — 16:00

**COFFEE BREAK**
16:00 — 17:00  SESSION FOUR — POLICY AND OBJECTIVES

Presented by Ted Thrasher, ICAO Environmental Officer

THE GUIDING PRINCIPLES

This session will introduce the participants to the current and future goals for managing and reducing aviation-related GHGs.

A. International Policy
   ▶ UNFCCC and Kyoto Protocol
   ▶ Main Challenges for ICAO

B. ICAO Programme of Action
   ▶ Global Goals
   ▶ Mitigation Measures
   ▶ Progress Monitoring

C. COP15 and beyond