

ICAO CAEP INDEPENDENT EXPERTS FUEL BURN REVIEW

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**USEPA MSTRS
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ICAO (a United Nations organization)

- Governed by Convention on International Civil Aviation, Chicago 1944
- Assembly: 190 Contracting States (meets triennially, 37th October 2010 Montreal)
- Council: 35 states elected by the Assembly
- Objective C: *Minimize the adverse effect of global civil aviation on the environment*



Environmental Activities

- ICAO, Air Transport Bureau (ATB), Environment Branch (ENV)
- **Committee on Aviation Environmental Protection (CAEP)**
 - Members (23 countries, including US)
 - Observers (13 countries, organizations)
 - European Commission (EC)
 - International Coalition for Sustainable Aviation (ICSA)
 - International Air Transport Association (IATA)
 - International Co-ordinating Council of Aerospace Industries Associations (ICCAIA)



Terms of Reference

- Process: Long Term Technology Goals (LTTG) Review
- Panel of Independent Experts (IEs)
- Effects of “major technologies” on fuel burn/efficiency on a 10 and 20 year time frame
- Focus on aircraft and engine technologies, not on operations or new types of fuels



Independent Experts

- **Professor Nick Cumpsty, United Kingdom (Elected by the IEs as Chair)**
Formerly at Rolls Royce, now at Imperial College London
- **Professor Juan J. Alonso, United States**
Formerly at NASA, now at Stanford University
- **Serge Eury, France**
Formerly SNECMA, VP for Res and Tech, now independent consultant
- **Dr. Lourdes Maurice, United States**
Chief Scientific and Technical Advisor for Environment, FAA
- **Bengt-Olov Nas, Sweden**
IATA, Formerly SAS, now independent aviation consultant
- **Malcolm Ralph, United Kingdom**
Formerly Dept of Trade and Industry, independent consultant
- **Professor Robert Sawyer, United States**
Intl Coalition for Sustainable Aviation (ICSA),
University of California, Berkeley



Review Schedule

- Fuel Burn Reduction Technology Workshop, 25-26 March 2009, London, UK
- Long-Term Technology Goal (LTTG) Review, 25-28 May 2010, during the ninth CAEP Cycle (CAEP/9)
- Review by the Independent Experts to be delivered to WG3 and CAEP in 2010



Review Process

- Assess efficiency gains, 10 and 20 years
 - Aerodynamics
 - Airframe and weight
 - Engine
- Aircraft optimization modeling
 - Metric: kg fuel/ATK
 - Predict fuel burn reduction for aircraft classes, ranges

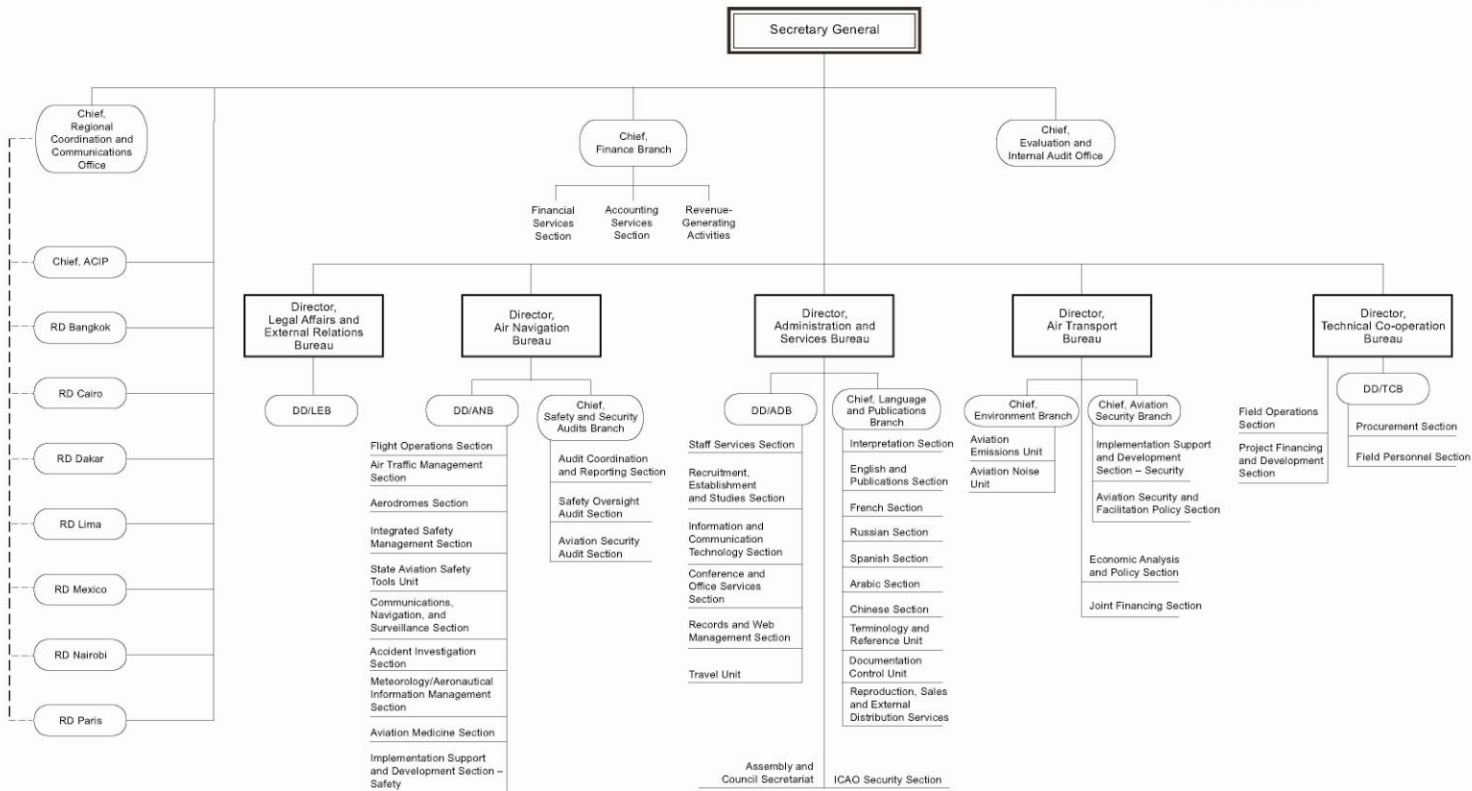




International Civil Aviation Organization

STRUCTURE OF ICAO SECRETARIAT

1 January 2010



----- For coordination

