

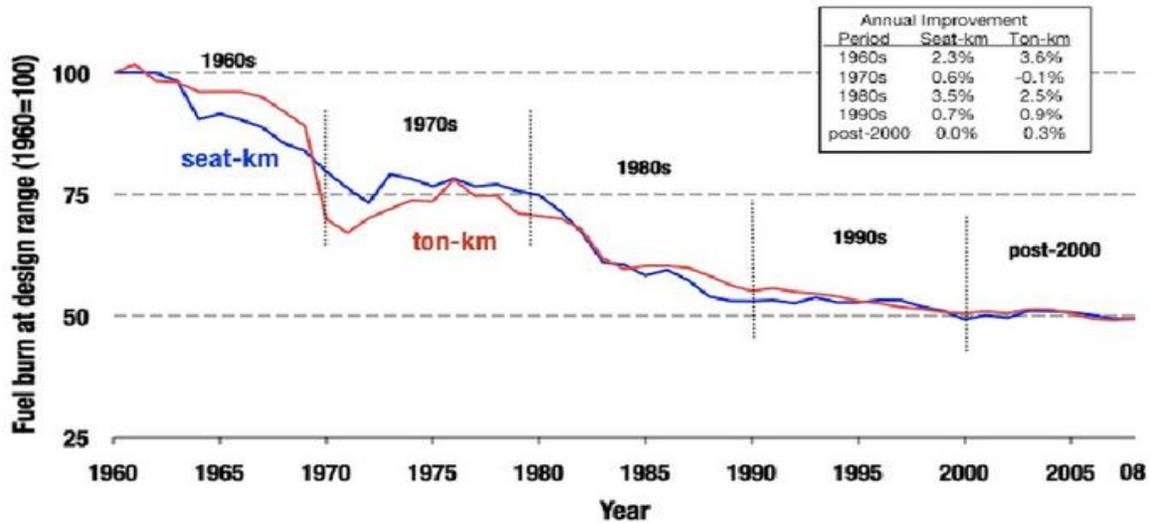
INTERNATIONAL: AVIATION: EFFICIENCY

History

In 1947, the Convention on International Civil Aviation, also known as the Chicago Convention, established the International Civil Aviation Organization (ICAO) as a United Nations agency responsible for global civil aviation.

Additionally, Article 2.2 of the Kyoto Protocol requested that developed countries pursue the limitation and reduction of greenhouse gas (GHG) emissions from aircraft through ICAO. Historically, ICAO asserted that market forces were sufficient in driving emissions efficiency, and therefore ICAO required no action in this realm. Contrary to this conventional wisdom, rising fuel costs have not been translated directly into increased fuel efficiency of new jet aircraft. Improvements have been inconsistent over the past two decades, with fuel efficiency of new aircraft improving at an average of 0.3 percent per year from 2000 to 2010 on an available seat-km basis.

Against this backdrop of stagnating efficiency improvements, there have been two recent initiatives to address emissions growth and fuel efficiency from commercial aircraft: an EU cap-and-trade system and an international CO₂ certification requirement.



Average Fuel Burn for New Aircraft, 1960-2008^[1]

Initiatives

EU cap-and-trade

Recently, the European community has begun to mitigate emissions growth from in-service aircraft by the incorporation of aviation into its own regional cap and trade system (EU ETS). The EU ETS, which in 2012 began incorporating domestic and international flights originating and into Europe in a cap and trade system for CO₂, has been met with resistance from some nations. In response to the EU ETS, ICAO has begun deliberation on its own proposal for a global framework for market-based strategies (e.g., global emission trading scheme, global offsetting with revenue generation). This would use an open cap and trade system or offsetting mechanism to internalize the cost of carbon and to raise funds for reductions in other sectors where reductions may be less costly.

The timeline for the ICAO market based measures recommendations is not fully clear but expectations lie currently for delivery of some guidance in 2014.

ICAO CO₂ certification requirement

In October 2010 the 37th Assembly (Resolution A37-19) requested the development of an ICAO CO₂ Emissions Standard. On 11 July 2012, global aviation moved an important step closer to establishing the worldwide Aircraft CO₂ Emissions Standard when the CAEP reached a unanimous agreement on a CO₂ metric system to underpin the CO₂ Standard. In February 2013, ICAO's Committee on Aviation Environmental Protection (CAEP) finalized a CO₂ certification requirement to serve as the basis for a global CO₂ (efficiency) standard for new aircraft, including metrics, fuel efficiency test points, and detailed certification procedures, to be added as a new volume to Annex 16 of ICAO's Convention on International Civil Aviation. The certification procedure describes how manufacturers should measure and report the CO₂ intensity of new aircraft to certifying authorities, and will serve as the basis for a global CO₂ (efficiency) standard for new aircraft when finalized.

Source:

http://transportpolicy.net/index.php?title=International:_Aviation:_Efficiency