

ANA Group's Environmental Initiatives

Path to Carbon Neutral Growth

Presented at Japan Aviation
Environmental Workshop

5 November 2014

Basic Approach

- Promotion of environmental preservation
Careful use of resources and energy towards creation of a sustainable society
- 1974 - Establishment of Environment Preservation Committee
- Certified by the Ministry of Environment as an Eco-First Company in 2008 – First in airline and transport industry
- Since 1999 – “Action Plan for the 21st Century”
Specific numerical targets for CO2 emission reduction for each medium-term period

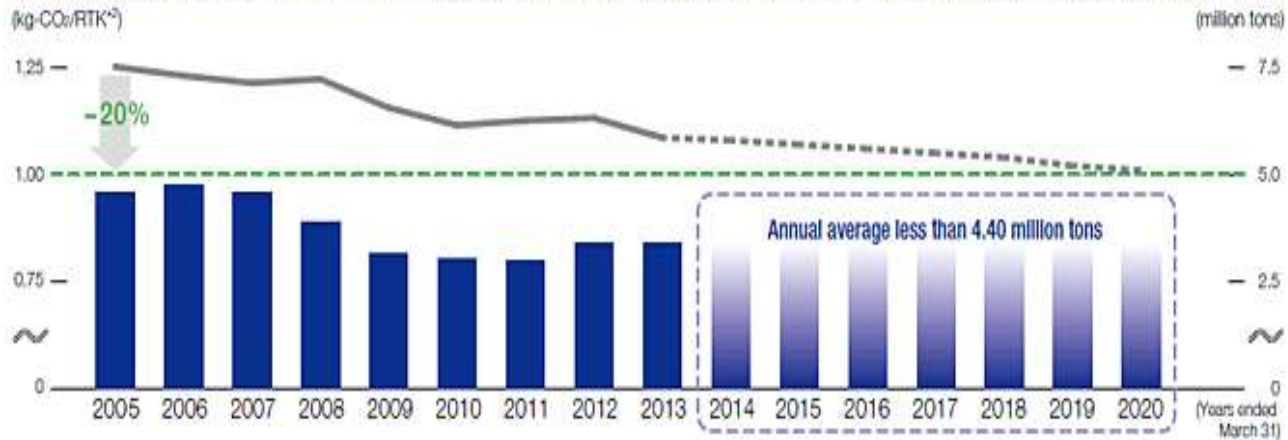
FLY ECO 2020

Medium-to-Long-Term Environmental Plan

- FLY ECO 2020 – Medium-to-Long-Term environmental plan from FY2012 to FY2020

ITEM		Targets	Results in FY2013
Climate Change Measures	Reduction of CO2 emissions from aircraft fuel	<p>Unit target -FY2020 20% reduction in CO2 emission per RTK from FY2005 level</p> <p>Total target – FY2012-2020 below 4.4 million tons for domestic routes</p>	<p>13.3% reduction from FY2005</p> <p>Total emission 9.448million tons – 4% increase. Reduction in CO2 emissions per RTK to 1.09kg-CO2</p> <p>Total target - 4.36million tons</p>
	<i>Reduction of ground energy</i>	Reduce energy use by 1% each year at all work sites	Total ground energy consumption 1.1% reduction
	Introduction of alternative fuels	Undertaking a thorough study towards a full-scale use by FY2020	Contributed to establishment of INAF and fostering INAF efforts towards building sustainable supply-chain . Supporting R&D on fuels made from such feedstocks as Euglena

ANA Group CO₂ Emission Targets and Results*1

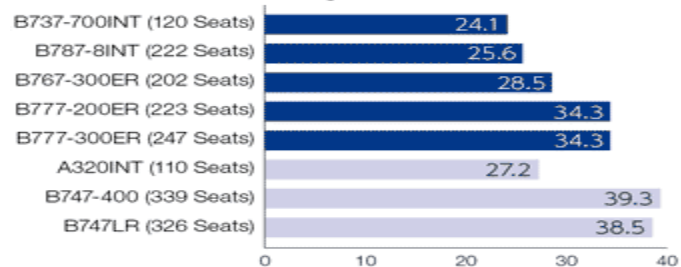


(Left) — CO₂ Emissions from International and Domestic Flights /RTK*2
 (Right) ■ CO₂ Emissions from Domestic Flights

*1 Vanilla Air (previously AirAsia Japan) is not included.
 *2 Total distance flown by revenue-paying passengers and cargo aboard aircraft.

◀ Fuel Consumption by Aircraft Type ▶

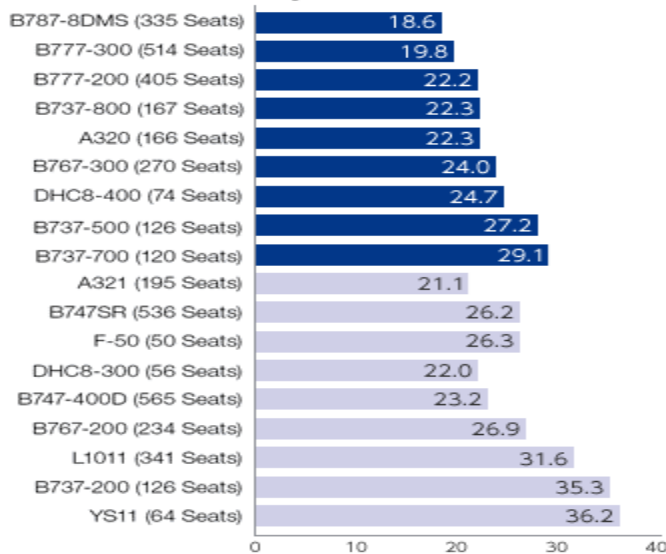
Aircraft for International Flights



Note: Calculated for international flights (assuming flight distances of 5,556km for the B737-700INT and A320INT and 9,260km for all other aircraft types, with full seating)

■ Retired aircraft

Aircraft for Domestic Flights

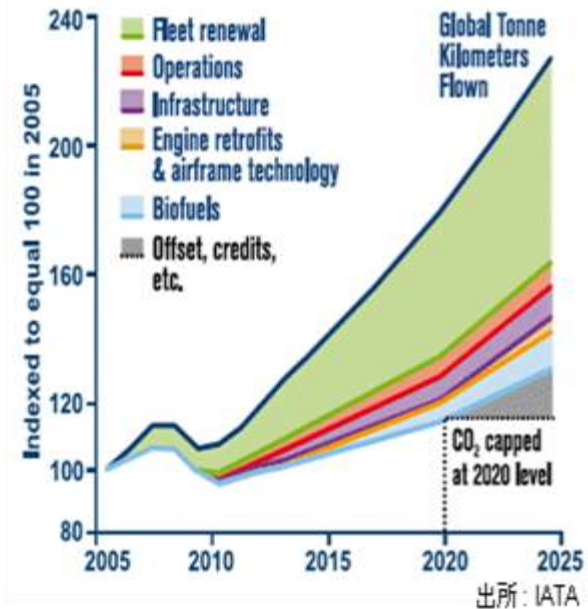
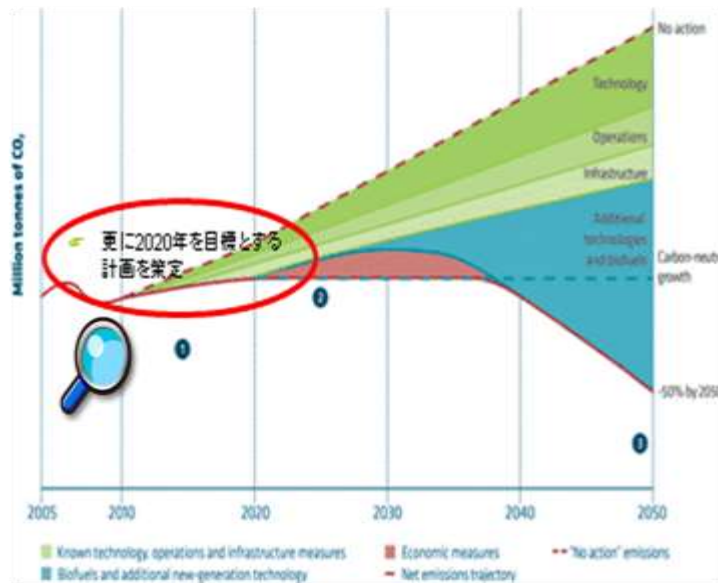


Note: Calculated for domestic flights (assuming flight distances of 926km and full seating)

■ Retired aircraft

➔ IATAはICAOの取組みに呼応して2020年を目標とするより具体的な行動計画を策定

➤ IATAの2050年迄のCO₂削減取組みの方向感



IATAの目標

1. 2020年から航空機のCO₂排出に上限を設定 ⇒ 実現にはバイオジェット燃料が不可欠
2. 2009年から2020年の間、世界平均年1.5%の燃費効率の改善を実現
3. 2050年迄に2005年比較でCO₂排出量を50%削減