

EU Aviation Emissions Monthly Update

October 2008

RDC Aviation Ltd is a provider of software, consultancy, environmental emissions analysis and data to the international aviation industry.

For additional information, assistance or further details about RDC Aviation Ltd and its products, please contact;

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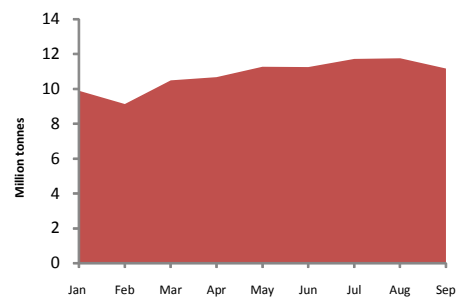
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Summary

EU CO₂ emissions estimates 2008 by month (million tonnes)

Month	Tonnes (m)
Jan	9.90
Feb	9.14
Mar	10.49
Apr	10.67
May	11.27
Jun	11.25
Jul	11.72
Aug	11.76
Sep	11.17



October 2008

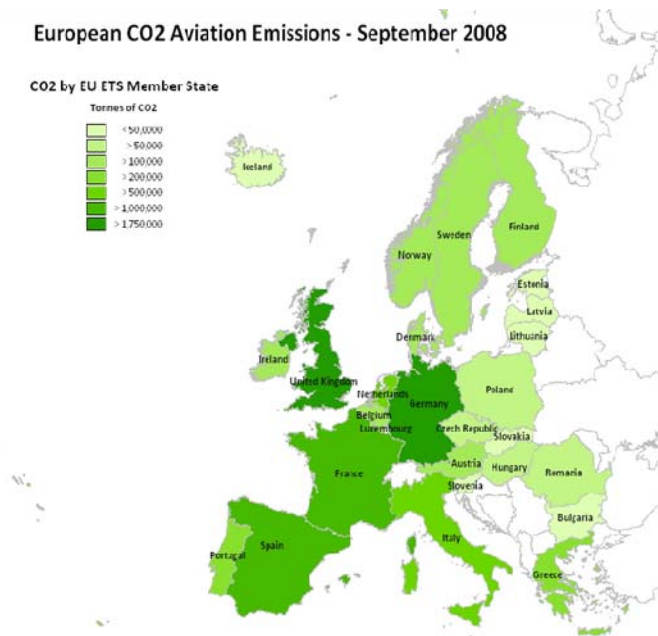
In July 2008, the European Parliament voted to include aviation in its Emissions Trading Scheme (ETS) with effect 1 January 2012. During year 1, airlines must cap CO₂ emissions at 97% of a baseline amount, calculated using average emissions from the period 2004-2006. The cap will fall to 95% in 2013. Assuming no change to current 2008 schedules or capacity:

- 275 scheduled airlines will be impacted by EU ETS
- Representing 45.2% of the world's scheduled airlines
- Representing 27.5% of global scheduled airline passengers

In Europe, each member state will be responsible for calculating and reporting its CO₂ emissions from aviation. Most commercial flights, including intercontinental services, arriving or departing an ETS member state are within scope.

European CO₂ Aviation Emissions - September 2008

CO₂ by EU ETS Member State



Initially 85% of credits will be allocated to the industry free of charge with 15% being auctioned. Proceeds from auctioning will be invested in projects combating the effect of climate change.

Globally, aviation is estimated to contribute approximately 2% of CO₂ emissions. Emissions from aviation in Europe however have almost doubled since 1990 and are forecast to grow

significantly in the coming years.

Opinion is mixed within the global aviation industry regarding the suitability of a trading system to limit CO₂ emissions and there is concern regarding possible distortion of competition between EU and non-EU carriers.

Monitoring Plans for ETS must be formulated and submitted during 2009. Airlines should therefore be acting now to implement appropriate strategies to mitigate possible risks to their business from 2012.

Metrics

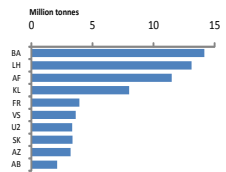
The tables and charts below represent scheduled airline services and exclude charter and freight. The data has been generated using methodology for calculating fuel burn and conversion factors as directed by the Intergovernmental Panel for Climate Change and ratified using proprietary RDC Aviation Ltd systems. Schedule feeds are taken from Innovata.

Unless otherwise specified, figures are September 2008 year to date. 'EU' is defined as the member states of the Emissions Trading Scheme as at September 2008.

CO₂ by airline - EU (million tonnes)

Rank	Airline	Sep 08 YTD
1	British Airways	14.16
2	Lufthansa	13.12
3	Air France	11.49
4	KLM	8.00
5	Ryanair	3.93
6	Virgin Atlantic	3.64
7	easyJet	3.34
8	SAS Scandinavian Airlines	3.36
9	Alitalia	3.20
10	Air Berlin	2.11

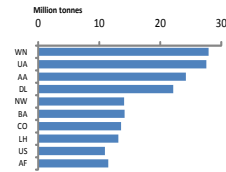
Top ten carriers totalling 66.3m tonnes of CO₂.



CO₂ by airline - global (million tonnes)

Rank	Airline	Sep 08 YTD
1	Southwest Airlines	27.92
2	United Airlines	27.54
3	American Airlines	24.20
4	Delta Air Lines	22.13
5	Northwest Airlines	14.08
6	British Airways	14.16
7	Continental Airlines	13.60
8	Lufthansa	13.12
9	US Airways	10.92
10	Air France	11.49

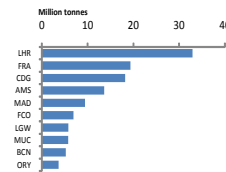
LH, BA and AF are the only EU registered companies in the world's top ten highest emitters of airline CO₂



CO₂ by airport - EU (million tonnes)

Rank	Airport	Sep 08 YTD
1	London Heathrow	32.93
2	Frankfurt	19.35
3	Paris CDG	18.22
4	Amsterdam	13.65
5	Madrid	9.44
6	Rome FCO	6.91
7	London Gatwick	5.80
8	Munich	5.77
9	Barcelona	5.25
10	Paris Orly	3.67

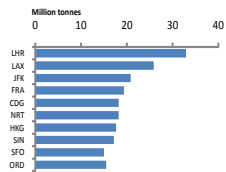
London Heathrow contributes over 27% of EU's top ten airports total emissions of CO₂.



CO₂ by airport - global (million tonnes)

Rank	Airport	Sep 08 YTD
1	London Heathrow	32.93
2	Los Angeles	25.87
3	New York JFK	20.85
4	Frankfurt	19.35
5	Paris CDG	18.22
6	Tokyo NRT	18.22
7	Hong Kong	17.65
8	Singapore	17.19
9	San Francisco	15.00
10	Chicago O'Hare	15.48

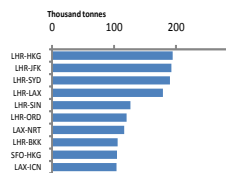
And is the number 1 in the world for airline emissions on departing services.



CO₂ by route - global (thousand tonnes)*

Rank	Route	Sep-08
1	LHR - HKG	194.73
2	LHR - JFK	192.57
3	LHR - SYD	190.04
4	LHR - LAX	178.90
5	LHR - SIN	126.49
6	LHR - ORD	120.34
7	LAX - NRT	116.44
8	LHR - BKK	105.82
9	SFO - HKG	104.75
10	LAX - ICN	104.12

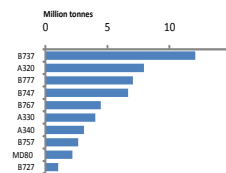
7 of the top 10 highest emitting airport pairs are ex-London Heathrow. *Data is collective CO₂ and not per passenger.



CO₂ by aircraft type - global (million tonnes)

Rank	Aircraft type	Sep-08
1	B737	12.08
2	A320	7.94
3	B777	7.06
4	B747	6.66
5	B767	4.47
6	A330	4.02
7	A340	3.11
8	B757	2.64
9	MD80	2.17
10	B727	1.03

B737 family emits the highest total CO₂ volume due to the high quantities in service.



Calculation methodology

The IPCC calculation logic and emissions factors use a distance based formula for the estimation of CO₂ between airport pairs which may not reflect the efficiency of different airlines using similar aircraft types for example, aircraft variants are grouped together into high level aircraft families. This methodology however is recommended as a valid calculation technique for estimating CO₂ emissions for ETS submission and filing and provides a consistent method of comparison.

RDC Aviation can provide a more detailed analysis using proprietary systems and methodologies as required.





Country focus

Each month, we will be providing a more detailed overview of emissions from an EU member state. This month, Italy. Data is for Q3 2008 (Jul – Sep)



Airlines	CO ₂ (mil tonnes)
1. Alitalia	1.0
2. Delta Airlines	0.4
3. Ryanair	0.3
4. Air One	0.3
5. easyJet	0.2
% of total country	40.8%

Airports	CO ₂ (mil tonnes)
1. Rome FCO	2.4
2. Milan MXP	1.2
3. Venice	0.3
4. Milan LIN	0.2
5. Pisa	0.1
% of total country	77.8%

Route	CO ₂ (mil tonnes)
1. FCO - JFK	0.14
2. FCO - EZE	0.09
3. FCO - NRT	0.08
4. FCO - EWR	0.07
5. FCO - GRM	0.07
% of total country	8.3%

	CO ₂ (mil tonnes)
Total Italy	5.4
Domestic	0.7
Intra EU	2.5
Intercontinental	2.2

RDC Aviation offers comprehensive carbon management services including detailed analysis and forecasts for CO₂ and other greenhouse gas emissions, ETS impact assessment, carbon procurement and trading, voluntary passenger offsetting and footprint consultancy.

Contact Iain Tunstall – Head of Relationships on iain.tunstall@rdcaviation.com or by telephone on 44 (0) 115 9598182 to discuss your requirements in more detail.



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