



Overview of the energy efficiency potential in the Airline industry in India

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The airline industry in India is a rapidly growing but highly competitive industry. Even with significant year on year growth most airlines are suffering losses or operating on very thin profit margins. The major cause attributed for these conditions are the high operating costs. Fuel costs are a major component and are responsible for 40% of the total operating costs. High fees charged by airports and an uncertain regulatory environment are also major factors.

In such conditions it is absolutely imperative for all airlines to adopt efficiency measures to cut down costs and remain competitive in the market.

A quick snapshot of the industry is given below which we will use to highlight the large potential for energy efficiency for the airlines.

	Total number of flying Hours/yr	Total flying distance/yr in '000 kms	Load Factor in 2010
Jet Airways	184,586	83,923	75%
Kingfisher Airlines	193,308	80,610	81%
Indigo Airlines	115,176	63,587	84%
SpiceJet	77,242	49,581	81%
GoAir	43,302	22,230	78%
Indian(Air India domestic + Indian Airlines + Alliance Air)	179,827	89,115	71%
Air India Express	6,092	2,547	55%
Jetlite	65,585	33,117	79%

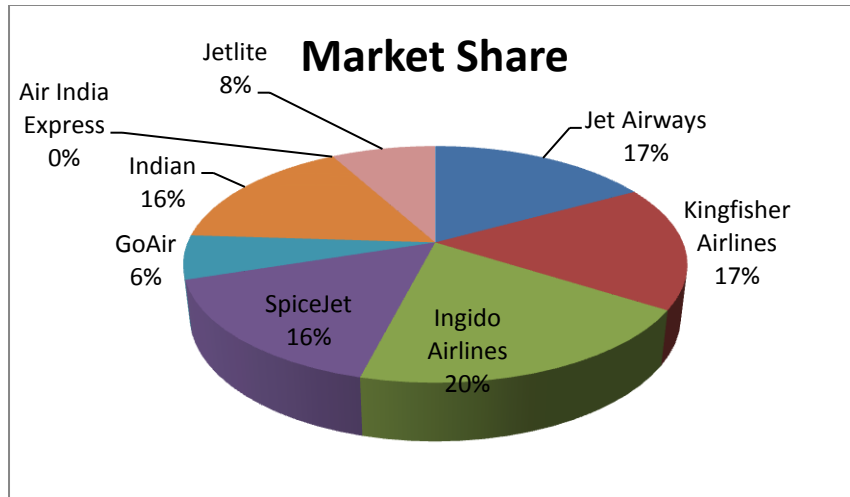
* Source: Director General of Civil Aviation (DGCA): Air Transport Statistics for the year 2009-2010

* All numbers are for domestic flights only

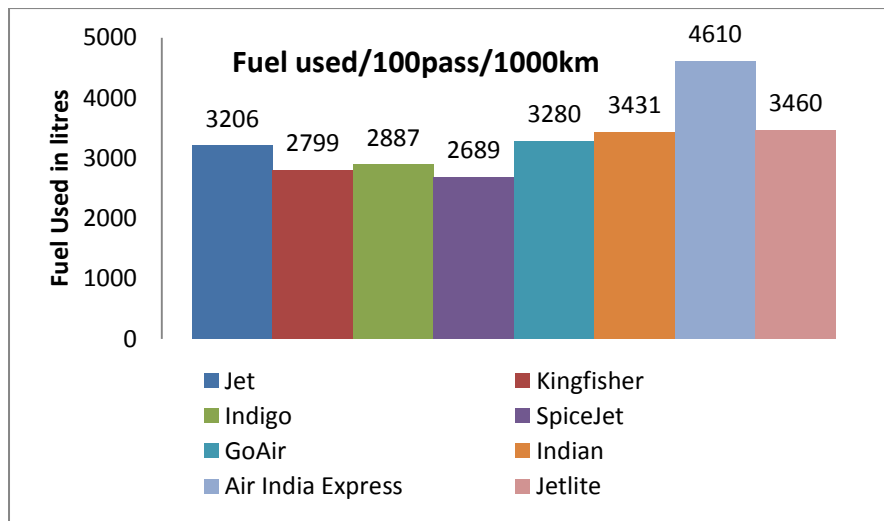
* Numbers are for the period Jan 2010 – December 2010

	Total Number of Passengers/yr	Total Mail/yr in tonnes	Total Freight/yr in tonnes
Jet Airways	9,716,489	2,215	71,311
Kingfisher Airlines	10,656,752	0	65,363
Indigo Airlines	8,496,425	0	76,355
SpiceJet	6,721,579	0	45,132
GoAir	3,085,480	0	0
Indian(Air India domestic + Indian Airlines + Alliance Air)	8,345,263	22,266	83,250
Air India Express	275,350	0	0
Jetlite	3,864,248	421	16,491

The current market leaders in terms of pure quantity of operations are Jet Airways, Kingfisher and Indian.

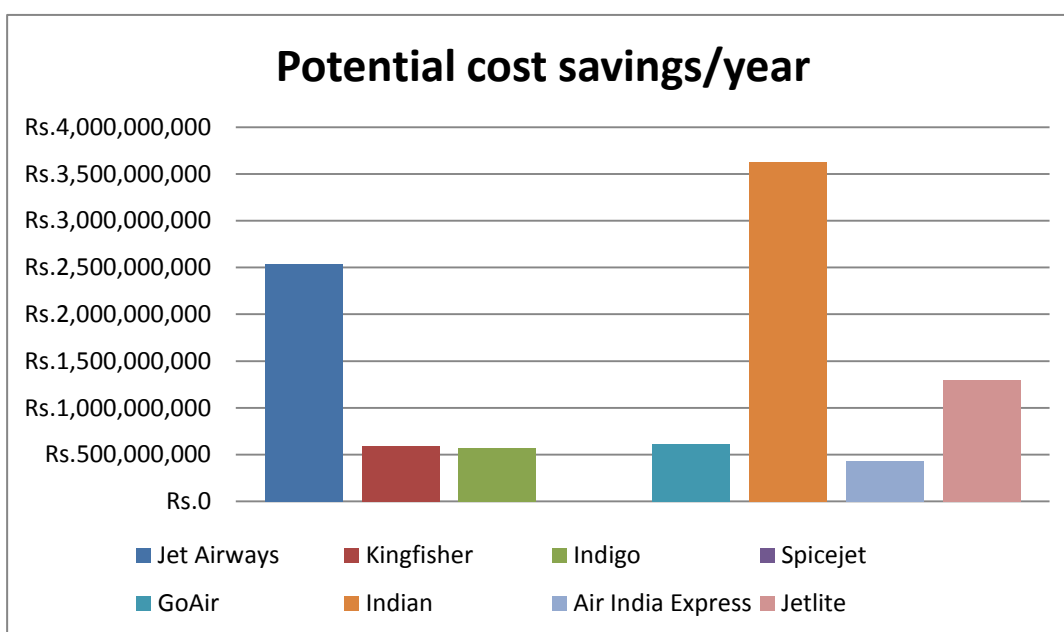


	Revenue Passenger-kms	Total fuel expenses for publicly listed companies	Fuel Used per 100 Passengers per 1000 km flight
Jet Airways	8,741,000,000	17,535,000,000	3,206
Kingfisher Airlines	8,819,000,000	15,880,000,000	2,799
Indigo Airlines	10,633,907,000	not available	2,887
SpiceJet	8,639,000,000	12,262,300,000	2,689
GoAir	2,943,317,938	not available	3,280
Indian(Air India domestic + Indian Airlines + Alliance Air)	8,317,238,000	not available	3,431
Air India Express	227,698,000	not available	4,610
Jetlite	4,206,310,000	not available	3,460



With the above given data it is evident that SpiceJet and Indigo are the most efficient airlines in respect to the amount of fuel they use per passenger per flight. We realize that comparing airlines in India to those abroad may not be very useful as conditions and state of the industry are very different. Hence we only benchmark the airlines to the “best in class” within the same market and operating conditions.

	Potential Fuel Conservation/Flight in liters Jet Fuel / flight	Total number of departures/yr	Total amount of Jet fuel saved/yr	Potential GHG savings in kgCO _{2e} /litre	Potential cost savings/year @Rs. 45.01/litre
Jet Airways	517	108,910	56306470	145833757	253,43,54,215
Kingfisher Airlines	110	120,362	13239820	34291133.8	59,59,24,298.2
Indigo Airlines	198	64,244	12720312	32945608	57,25,41,243.1
SpiceJet	0	49,592	0	0	0
GoAir	591	22,945	13560495	35121682.05	61,15,78,324.5
Indian(Air India domestic + Indian Airlines + Alliance Air)	742	108,655	80622010	208811005.9	362,87,96,670
Air India Express	1,921	4,989	9583869	24822220	43,13,69,943
Jetlite	771	37,342	28790682	74567866	129,58,68,597
Total			21,48,23,658	556393272.8	967,04,33,291



The above number show that the industry as a whole can save almost 214 million litres of jet fuel annually if all airlines improve their efficiency atleast to the level of the best among their peers which is currently SpiceJet. This translates to a savings of almost Rs.10 billion annually for the industry which is a significant component of their annual costs. This would also lead to emissions avoidance of 0.6 million tonnes of CO_{2e}.

Considerable savings are possible through various means such as increasing the load factor by better scheduling or code sharing with other airlines on low occupancy routes. Savings of emissions can also be undertaken by including parcel and main facilities as part of regular flight operations.