FACT SHEET: U.S.

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THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

U.S. DOMESTIC AIRLINE FUEL EFFICIENCY RANKING, 2014

A new report by the International Council on Clean Transportation compares the fuel efficiency, and therefore carbon intensity, of U.S. airlines on domestic operations in 2014. The report updates ICCT's ranking of U.S. airline fuel efficiency since 2010, discusses industry-wide changes since 2013, and highlights key drivers of fuel efficiency, such as higher density seating configurations.

This study comes only months after the U.S. Environmental Protection Agency (EPA) proposed in July to regulate aviation greenhouse gas (GHG) emissions from aircraft under the Clean Air Act. Commercial aircraft, including passenger, cargo, and other charter flights, accounted for 11% of GHG emissions from the U.S. transportation sector in 2013. The Federal Aviation Administration (FAA), in its 2015 U.S. aviation GHG reduction plan, estimates that under a business as usual scenario GHG emissions from U.S. aviation will increase by more than 100% by 2050 compared to 2005 levels, with even faster growth expected globally.

Table 1 presents the Fuel Efficiency Score, a unitless fuel efficiency metric that indicates the transport service provided by an airline per unit fuel consumed relative to other airlines, for each major U.S. airline on domestic operations in 2014. A higher FES denotes higher fuel efficiency, and an FES of 1.00 represents the average airline (Hawaiian Airlines, highlighted in red). Table 2 summarizes each airline's fuel efficiency ranking since the benchmark year, 2010.

Table 1. Fuel Efficiency Scores (FES), 2014

Rank	Airline	FES	Excess Fuel Per Unit Transport Service
1	**Alaska**	1.14	—
2	**Spirit**	1.13	+1%
3	**Frontier**	1.10	+4%
4	**Southwest**	1.08	+6%
5	**United**	1.01	+13%
6	**Hawaiian**	**1.00**	+14%
7	**US Airways**	0.97	+17%
8	**Allegiant**	0.96	+19%
9	**JetBlue**	0.95	+20%
9	**Sun Country**	0.95	+20%
11	**Delta**	0.94	+21%
12	**Virgin America**	0.93	+22%
13	**American**	0.91	+25%

HIGHLIGHTS

- Alaska, Spirit, Frontier, and Southwest remained the four most fuel-efficient airlines on U.S. domestic operations in 2014. On average, Alaska has operated the most efficient U.S. domestic flights for five years running.
- The gap between the most and least fuel-efficient airlines narrowed slightly to 25% in 2014, compared with 27% in 2013.
- On a passenger mile per fuel metric, overall industry fuel efficiency improved by 1.7% from

2013 to 2014. Operational improvements, including a 1% gain in passenger load factor and 1.6% increase in seating density, accounted for most of the gain. Fleet renewal programs and reduced usage of older aircraft also helped reduce airline fuel consumption.

» The past five years have seen a steady increase in seats available per flight, driven by use of larger aircraft or simply adding more seats to aircraft. Airlines can move the same number of passengers with fewer flights, which translates into increased fuel efficiency, but at the cost of reduced passenger comfort and access.

» All major airlines were profitable in 2014. A stronger correlation between fuel efficiency and profitability was observed in 2014 than in 2013, despite a sharp fall in oil prices in the latter half of the year.

» The International Civil Aviation Organization (ICAO) plans to establish the first aircraft fuel efficiency standards in 2016, and U.S. EPA standards are expected to follow soon after.

» ICAO is also developing a mechanism to cap the aviation sector's net emissions at the 2020 level. This is significant because the carbon emissions of aviation are already large—roughly equivalent to Germany's—and growing rapidly.

Table 2. Airline fuel efficiency rankings, 2010–2014

RANK	2010	2011	2012	2013	2014	RANK
1	Alaska	Alaska	Alaska	Alaska*	Alaska	1
2	Spirit*	Spirit	Spirit	Spirit*	Spirit	2
3	Hawaiian*	Southwest*	Southwest*	Frontier*	Frontier	3
4	Continental	Hawaiian*	Hawaiian*	Southwest	Southwest	4
5	Southwest	Frontier	Frontier	Hawaiian	United	5
6	Frontier	Continental →	United	United	Hawaiian	6
7	JetBlue	JetBlue	JetBlue	JetBlue	US Airways	7
8	United	United	Virgin*	Delta	Allegiant	8
9	Virgin	Delta	Delta*	Virgin*	JetBlue*	9
10	Sun Country	Sun Country*	US Airways*	US Airways*	Sun Country*	10
11	Delta	US Airways*	Sun Country	Sun Country	Delta	11
12	US Airways	Virgin*	Allegiant*	Allegiant	Virgin	12
13	AirTran	AirTran	American*	American	American	13
14	American	American	–	–	–	
15	Allegiant	Allegiant	–	–	–	

* Denotes ties between airlines in a given year → Denotes mergers

PUBLICATION INFORMATION

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