

FACT SHEET: U.S. AND EUROPE

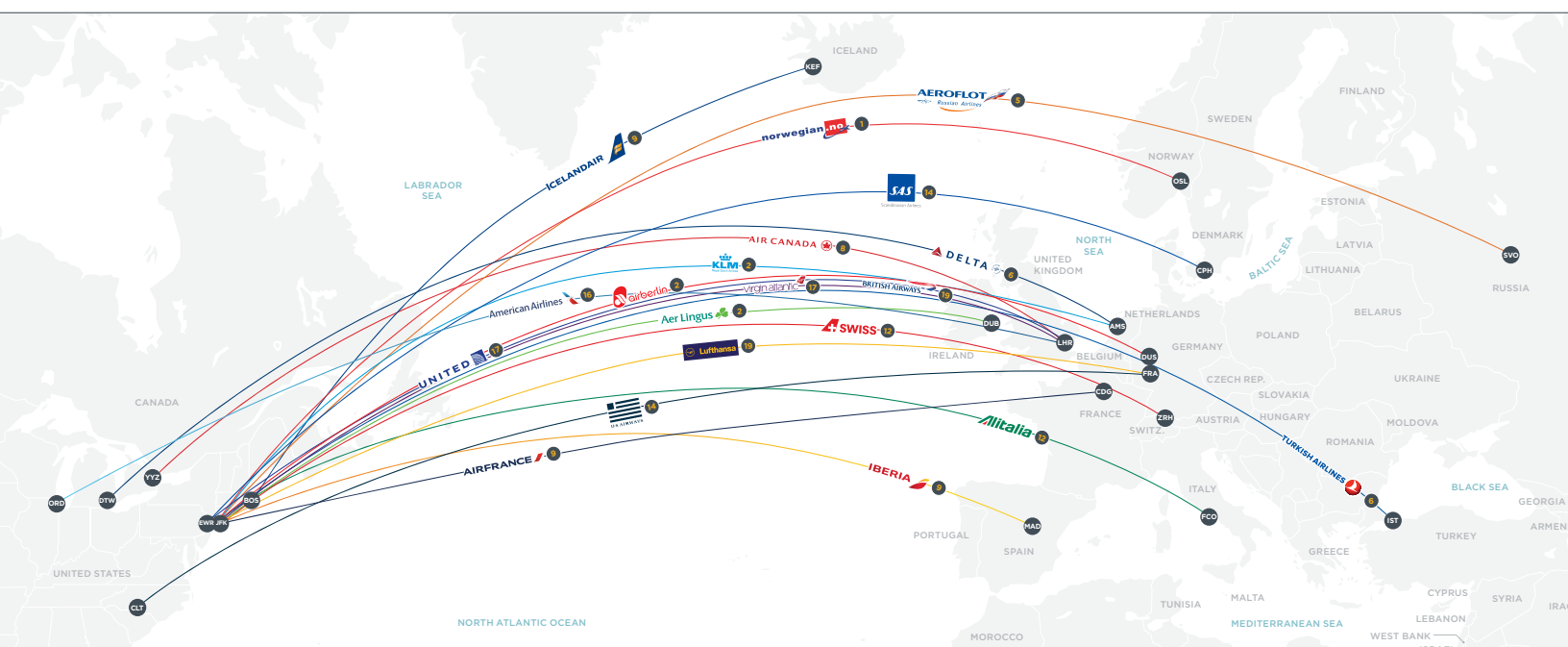
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THE INTERNATIONAL COUNCIL
ON CLEAN TRANSPORTATION

TRANSATLANTIC AIRLINE FUEL EFFICIENCY RANKING, 2014

A new report by the International Council on Clean Transportation compares the top 20 airlines on transatlantic routes in terms of fuel efficiency (i.e., carbon intensity) in 2014.



Rank	Airline	Airport pair	pax-km/L	kg CO ₂ per round-trip itinerary	Rank	Airline	Airport pair	pax-km/L	kg CO ₂ per round-trip itinerary
1	Norwegian	JFK ⇌ OSL	42	720	9	Air France	CDG ⇌ JFK	32	930
2	Air Berlin	DUS ⇌ JFK	36	840	12	Alitalia	FCO ⇌ JFK	31	1100
2	KLM	AMS ⇌ JFK	36	830	12	Swiss	JFK ⇌ ZRH	31	1000
2	Aer Lingus	DUB ⇌ JFK	36	720	14	US Airways	CLT ⇌ FRA	30	1200
5	Aeroflot	JFK ⇌ SVO	35	1100	14	SAS	CPH ⇌ EWR	30	1000
6	Turkish Airlines	IST ⇌ JFK	34	1200	16	American Airlines	LHR ⇌ ORD	29	1100
6	Delta	AMS ⇌ DTW	34	1000	17	Virgin Atlantic	JFK ⇌ LHR	28	1000
8	Air Canada	LHR ⇌ YYZ	33	870	17	United	LHR ⇌ EWR	28	1000
9	Icelandair	BOS ⇌ KEF	32	620	19	Lufthansa	FRA ⇌ JFK	27	1200
9	Iberia	JFK ⇌ MAD	32	920	19	British Airways	LHR ⇌ JFK	27	1100

Fuel efficiency and carbon dioxide emissions for nonstop, round-trip itinerary, top 20 airlines' most prevalent routes, 2014.

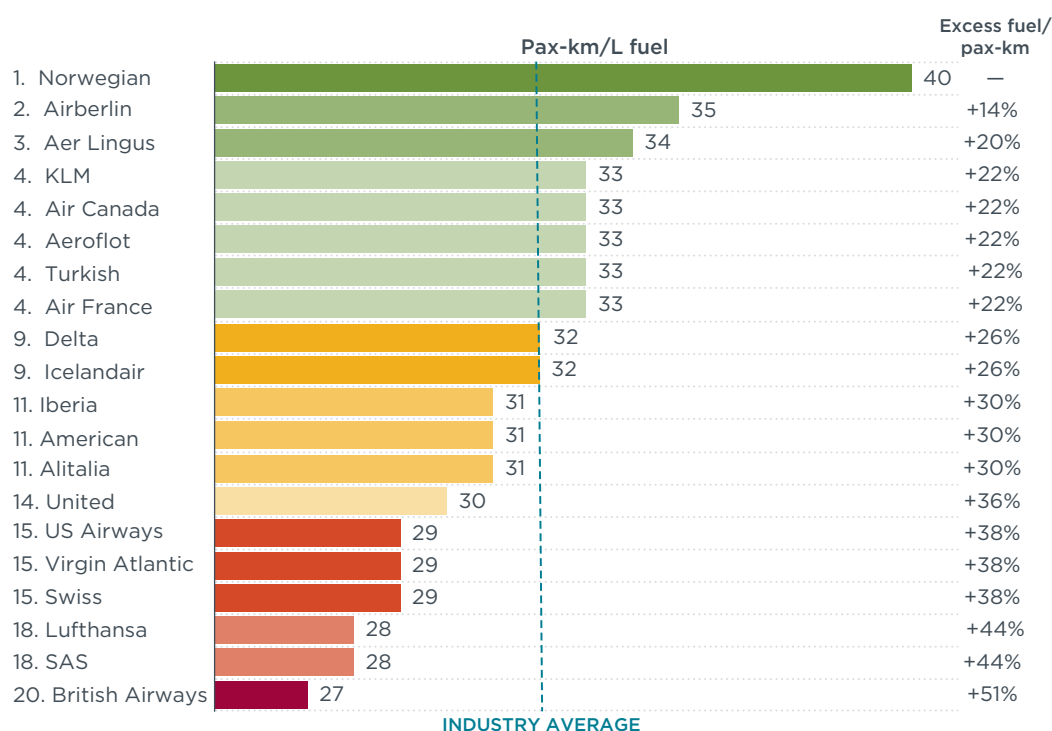
HIGHLIGHTS

- » The gap between the most and least fuel-efficient airlines on 2014 transatlantic operations was 51%. That is roughly twice the performance gap between the best and worst U.S. airlines on domestic operations (25% in 2014).
- » The three least-efficient airlines (Lufthansa, SAS, and British Airways) were collectively responsible for one-fifth of transatlantic available seat kilometers and burned 44%-51% more fuel per passenger kilometer than the most efficient, Norwegian Air Shuttle.
- » A nonstop round-trip transatlantic flight averaged about one tonne of CO₂ emissions per passenger, equivalent to emissions from a 35-kilometer daily commute in a Toyota Prius over a work year.
- » Seating configuration and aircraft fuel burn (i.e., fuel economy of the aircraft operated) are the two most important factors influencing airline fuel efficiency; together they explain about 80% of the variation in fuel efficiency among the airlines studied.
- » Passenger load factor (i.e., percentage of seats filled) and freight carriage are relatively less important drivers of fuel efficiency.

- » Airlines that have invested in new, advanced aircraft (e.g., Norwegian Air Shuttle) are significantly more fuel-efficient than airlines flying older planes, highlighting the crucial role of technology (and thus performance standards) in driving down fuel consumption and associated carbon emissions.
- » The impact of premium seating on emissions is substantial: first class and business seats accounted for only 14% of available seat kilometers flown on transatlantic routes but approximately one-third of total carbon emissions. For carriers like British Airways and Swiss, premium seating was responsible for almost one-half of their total emissions from passenger travel.

BACKGROUND

- » Globally, aircraft emitted about 700 million metric tons of CO₂ in 2013. If global aviation were a country, it would rank 21st in terms of GDP, but 7th in terms of CO₂ emissions, just behind Germany and well ahead of South Korea.
- » Absent policy interventions, aviation emissions are on pace to triple by 2050 — a period in which many developed countries hope to reduce their emissions by up to 80%.



Average overall fuel efficiency of the top 20 airlines on transatlantic routes, 2014

- » The International Civil Aviation Organization (ICAO) has committed to develop a global framework — an aircraft CO₂ (efficiency) standard and a framework for market-based measures — for controlling CO₂ emissions from aviation by 2016. But the process has been hampered by disagreements over how to equitably distribute reduction targets by country or carrier.
- » The European Union in 2012 suspended its action requiring foreign air carriers flying to or from EU airports to participate in the EU Emissions Trading System. An insufficiently effective MBM framework agreement from ICAO could cause the EU to reimpose that requirement.
- » The U.S. Environmental Protection Agency in 2015 published a draft “endangerment finding,” which is the first formal step toward regulating aviation greenhouse gases under the Clean Air Act. The eventual outcome will be a rule to limit emissions — either U.S. domestic enforcement of ICAO’s CO₂ emission standard for new aircraft or a more stringent U.S.-only aircraft standard.
- » Delegates to the 21st session of the Conference of the Parties to the UNFCCC (COP 21) will be meeting in early December at Paris’s Le Bourget Airport. Among other issues, they will discuss how to incorporate greenhouse gas emissions from international aviation into a global climate protection framework.

PUBLICATION INFORMATION

Transatlantic Airline Fuel Efficiency Ranking, 2014

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The International Council on Clean Transportation is an independent nonprofit organization founded to provide first-rate, unbiased research and technical and scientific analysis to environmental regulators.

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