atmosfair Airline Index 2026



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Overall Ranking

(Low-Cost Carriers see page 5)

*EP: efficiency points (maximum=100), **EC: efficiency class (A – G), Pax: Passengers, NC: Net Carrier, C: Charter, R: Regional

Overall ranking							Distance Rating						
							Short haul		Medium haul		Long haul		EP
							<800 km		800 - 3800 km		>3800 km		
#	Airline	Typ	Pax (Mio.)	Country	EP*	EC**	EP	#	EP	#	EP	#	2025
1	Oman Air	NC	5.8	Oman	81.8	C	65.0	68	76.2	17	83.4	1	64.3
2	Sky Airline	NC	5.5	Chile	80.8	C	83.2	4	80.6	4	77.0	20	81.0
3	Southwind	NC	2.3	Turkey	80.5	C	68.6	54	80.4	5	83.0	3	79.4
4	TUI fly Netherlands	C	1.0	Netherlands	80.4	C	60.7	77	81.8	3	79.7	10	78.6
5	Xiamen Airlines	NC	37.2	China	79.6	D	85.5	1	82.8	1	73.6	30	78.1
6	Shandong Airlines	NC	27.8	China	79.3	D	82.7	5	79.3	7	78.3	11	79.4
7	TUI fly Belgium	C	2.0	Belgium	78.8	D	66.5	60	78.7	10	81.6	4	69.7
8	Hainan Airlines	NC	70.6	China	78.7	D	77.0	11	75.8	22	80.6	7	76.2
9	Qingdao Airline	NC	5.3	China	78.4	D	83.3	3	79.0	9	67.8	54	79.5
10	Starlux	NC	5.0	Taiwan	78.2	D	83.7	2	75.5	24	83.1	2	78.2
11	Air Mauritius	NC	1.6	Mauritius	78.1	D	77.5	8	76.8	16	78.3	11	74.3
12	El Al Israel Airlines	NC	6.8	Israel	78.0	D	74.6	20	82.6	2	77.1	19	78.3
13	Air Europa	NC	13.0	Spain	77.4	D	76.4	12	78.2	11	77.3	17	75.9
14	Biman Bangladesh Airlines	NC	3.0	Bangladesh	77.1	D	58.8	81	73.1	39	77.8	14	77.5
15	Beijing Capital Airlines	NC	14.5	China	76.8	D	76.0	15	77.0	15	75.1	25	65.2
16	Aegean Airlines	NC	16.5	Greece	76.3	D	70.6	40	77.2	14	77.4	16	74.9
17	LATAM Airlines	NC	12.7	Chile	76.2	D	73.4	25	74.6	29	80.1	8	77.4
18	Shanghai Airlines	NC	15.7	China	76.1	D	70.0	45	75.2	26	76.5	21	72.4
19	SmartWings	NC	4.2	Czech Republic	75.9	D	77.3	10	75.7	23	77.7	15	77.1
20	Juneyao Airlines	NC	19.9	China	75.8	D	72.7	30	74.6	29	81.2	6	73.7
20	TUI fly	C	3.8	Germany	75.8	D	71.9	36	75.9	21	74.6	27	76.1
22	Copa Airlines	NC	18.7	Panama	75.7	D	79.2	6	76.2	17	75.4	24	74.0
23	China Airlines	NC	11.7	Taiwan	75.2	D	76.1	14	78.2	11	72.4	37	76.3
24	TUI Airways	C	12.0	United Kingdom	75.1	D	76.3	13	74.1	34	77.2	18	76.8
25	Etihad Airways	NC	22.0	Un. Arab Emirates	75.0	D	56.1	92	72.7	42	75.7	23	74.7
26	Batik Air Malaysia	NC	8.8	Malaysia	74.9	D	75.4	16	75.5	24	74.2	28	74.7
27	Transavia France	C	16.0	France	74.7	D	75.3	17	74.8	27	71.9	39	74.0
28	China Southern Airlines	NC	126.6	China	74.5	D	74.4	21	73.8	35	80.1	8	72.7
28	Japan Airlines	NC	35.0	Japan	74.5	D	72.4	32	79.5	6	72.0	38	75.8
30	Jet2.com	C	21.0	United Kingdom	74.2	D	69.4	50	74.3	32	70.4	46	74.4
31	SAS Scandinavian Airlines	NC	29.2	Sweden	73.7	D	77.4	9	79.1	8	61.8	76	69.7
32	SunExpress	C	15.7	Turkey	73.5	D	70.2	42	73.6	37	--	--	73.0
33	Aeromexico	NC	19.9	Mexico	73.3	D	75.1	18	72.9	40	73.6	30	74.3
34	Air India	NC	37.0	India	73.0	D	74.7	19	74.7	28	70.2	47	70.6
35	Avianca	NC	25.3	Columbia	72.8	D	66.2	61	70.1	61	78.1	13	73.0
36	Sichuan Airlines	NC	36.0	China	72.4	D	68.3	55	72.2	47	75.9	22	68.3
37	Air Baltic Corporation	NC	5.2	Latvia	72.3	D	70.4	41	72.7	42	70.6	44	73.0
38	Air Transat A.T.	C	5.4	Canada	72.1	D	57.7	87	71.3	55	72.7	35	70.5
39	KLM-Royal Dutch Airlines	NC	34.5	Netherlands	72.0	D	73.8	24	76.0	19	70.9	43	72.9
40	Shenzhen Airlines	NC	35.1	China	71.9	D	72.9	28	71.8	51	--	--	69.3
41	Nordwind Airlines	C	4.0	Russian Federation	71.8	D	71.9	36	71.9	50	70.5	45	72.3
42	Alaska Airlines	NC	36.0	USA	71.5	D	54.0	99	70.9	58	72.7	35	69.5

#	Airline	Typ	Pax (Mio.)	Country	EP*	EC**	Short haul <800 km EP	Short haul <800 km #	Medium haul 800 - 3800 km EP	Medium haul 800 - 3800 km #	Long haul >3800 km EP	Long haul >3800 km #	EP 2025
43	Guangxi Beibu Gulf Airlines	R	#NV	China	71.4	D	68.0	58	71.6	52	--	--	69.1
43	Thai Airways International	NC	16.2	Thailand	71.4	D	70.1	43	68.0	70	73.4	32	71.5
43	Virgin Australia International	NC	22.4	Australia	71.4	D	72.2	35	71.0	57	72.9	34	68.5
46	Air China	NC	87.8	China	70.9	D	69.5	49	68.5	65	81.3	5	68.8
47	Neos Air	NC	3.0	Italy	70.6	D	68.1	57	70.6	59	--	--	68.9
47	Uzbekistan Airways	NC	5.9	Uzbekistan	70.6	D	71.0	38	72.8	41	62.3	73	70.4
49	ITA Airways	NC	16.0	Italy	70.2	D	72.3	33	71.3	55	69.1	49	69.3
50	China Eastern Airlines	NC	122.9	China	69.8	D	70.1	43	70.4	60	67.9	53	67.0
50	Vietnam Airlines	NC	24.2	Vietnam	69.8	D	69.6	48	67.7	71	74.8	26	70.4
52	Gulf Air	NC	6.6	Bahrain	69.6	D	51.0	105	66.5	81	73.1	33	66.2
53	Brussels Airlines	NC	9.1	Belgium	69.5	D	72.3	33	77.3	13	59.6	83	69.4
54	Icelandair	NC	5.2	Iceland	69.2	D	--	--	72.7	42	67.0	58	68.9
55	AZUR air	C	2.0	Russian Federation	69.1	D	--	--	69.4	63	68.9	50	71.2
55	Condor Flugdienst	C	9.7	Germany	69.1	D	57.9	86	76.0	19	64.0	69	70.7
57	Malaysia Airlines	NC	15.0	Malaysia	68.9	D	68.3	55	71.5	53	67.0	58	65.8
58	Cathay Pacific Airways	NC	28.9	China	68.8	D	58.8	81	67.3	74	69.7	48	67.8
59	Porter Airlines	R	5.0	Canada	68.5	D	70.0	45	68.5	65	66.8	61	74.1
60	Air Cairo	NC	6.0	Egypt	68.2	D	58.1	84	68.4	67	71.7	40	69.9
61	Finnair	NC	11.9	Finland	68.1	D	55.7	96	65.7	85	71.2	41	68.1
61	UTair Aviation	NC	6.0	Russian Federation	68.1	D	73.9	22	67.4	73	65.9	63	66.0
63	Fiji Airways	NC	2.0	Fiji	67.7	D	45.3	106	68.1	69	67.5	57	72.6
64	TAP Portugal	NC	16.7	Portugal	67.5	D	59.2	80	72.7	42	64.7	67	66.7
64	United Airlines	NC	146.1	USA	67.5	D	57.6	88	70.0	62	65.6	65	66.4
66	Philippine Airlines	NC	7.9	Philippines	67.4	D	72.8	29	72.7	42	59.7	82	69.9
67	Qatar Airways	NC	44.6	Qatar	67.1	D	59.4	79	68.4	67	66.9	60	70.7
68	Air New Zealand	NC	16.0	New Zealand	66.6	D	72.5	31	73.5	38	46.9	101	72.8
69	Breeze Airways	R	6.0	USA	66.5	D	57.2	89	67.0	77	71.2	41	65.8
69	Turkish Airlines	NC	68.9	Turkey	66.5	D	65.9	63	65.3	86	67.6	56	62.7
71	Pakistan Airlines	NC	3.8	Pakistan	66.4	D	69.3	51	67.5	72	52.4	95	66.9
72	Asiana Airlines	NC	16.7	Korea	66.0	D	52.6	104	66.6	80	68.3	52	68.6
72	Discover Airlines	NC	4.0	Germany	66.0	D	43.7	107	74.3	32	55.2	92	64.6
74	All Nippon Airways	NC	49.1	Japan	65.7	D	58.1	84	67.1	75	65.5	66	58.3
75	Aer Lingus	NC	11.0	Ireland	65.5	D	78.1	7	72.1	48	58.0	89	65.8
75	Singapore Airlines	NC	27.5	Singapore	65.5	D	70.8	39	74.5	31	63.0	71	47.5
77	TianJin Airlines	R	14.3	China	65.4	D	57.0	91	66.7	79	68.8	51	65.7
78	Hong Kong Airlines	NC	5.0	China	64.9	D	56.1	92	66.4	82	54.3	94	65.1
79	Egyptair	NC	11.1	Egypt	64.7	D	67.5	59	62.4	96	66.7	62	65.8
80	Air Canada	NC	31.0	Canada	64.6	D	69.2	52	65.1	88	64.2	68	71.6
81	Air Astana	NC	5.2	Kazakhstan	64.0	D	65.1	67	64.5	90	63.5	70	63.8
82	Korean Air	NC	25.2	Korea	63.8	D	69.9	47	69.3	64	60.4	78	62.7
83	American Airlines	NC	166.5	USA	63.7	D	52.8	103	66.9	78	59.8	81	64.2
83	Edelweiss Air	NC	3.0	Switzerland	63.7	D	58.3	83	66.3	83	59.4	84	61.1
83	LOT - Polish Airlines	NC	11.7	Poland	63.7	D	36.4	110	62.3	98	74.2	28	59.6
86	Lufthansa German Airlines	NC	55.3	Germany	63.6	D	60.8	76	73.8	35	60.2	79	60.1
87	Royal Jordanian	NC	4.4	Jordan	63.5	D	59.9	78	62.4	96	65.7	64	58.1
88	Aeroflot Russian Airlines	NC	55.0	Russian Federation	63.3	D	63.1	72	63.9	91	62.2	74	70.5
89	Virgin Atlantic Airways	NC	6.0	United Kingdom	62.8	D	6.2	111	50.8	108	62.9	72	62.1
90	British Airways	NC	45.9	United Kingdom	62.7	D	65.5	66	71.4	54	58.3	87	63.5
91	Austrian Airlines	NC	14.8	Austria	62.5	D	53.5	101	66.3	83	62.0	75	63.0

Platz	Airline	Typ	Pax (Mio.)	Country	EP*	EC**	Short haul <800 km EP	#	Medium haul 800 - 3800 km EP	#	Long haul >3800 km EP	#	EP 2025
91	Bulgaria Air	NC	0.9	Bulgaria	62.5	D	62.6	73	62.5	95	--	--	60.4
93	Air France	NC	42.0	France	62.3	D	73.2	26	65.2	87	60.8	77	69.4
94	Batik Air	NC	11.0	Indonesia	62.1	D	62.0	74	62.1	99	--	--	61.1
95	Tibet Airlines	R	7.0	China	61.7	D	63.8	71	61.3	101	--	--	61.7
96	Iberia	NC	19.1	Spain	61.1	D	73.2	26	67.1	75	55.7	91	75.7
97	Qantas Airways	NC	31.3	Australia	60.8	D	69.0	53	62.6	94	58.1	88	58.4
98	Delta Air Lines	NC	166.0	USA	60.6	D	57.1	90	63.5	92	59.0	86	59.7
99	Air Macau	NC	3.3	China	60.4	D	61.3	75	60.4	102	--	--	59.2
100	Srilankan Airlines	NC	4.2	Sri Lanka	60.2	D	64.0	70	60.2	103	60.0	80	56.4
101	Azerbaijan Airlines	NC	4.2	Azerbaijan	60.0	D	53.8	100	61.7	100	54.5	93	59.8
102	SAUDIA	NC	37.0	Saudi Arabia	59.9	E	55.4	98	55.7	106	67.7	55	57.4
103	China Express Airlines	R	11.0	China	59.7	E	55.8	95	62.7	93	--	--	57.2
104	EVA Airways	NC	13.3	Taiwan	59.6	E	65.9	63	65.1	88	57.0	90	61.4
105	Air Serbia	NC	4.5	Serbia	59.1	E	66.2	61	60.1	104	48.3	99	59.3
106	Royal Air Maroc	NC	8.3	Morocco	57.7	E	55.7	96	56.9	105	59.4	84	60.7
107	Swiss	NC	18.1	Switzerland	54.7	E	64.4	69	72.0	49	47.7	100	53.9
108	Garuda Indonesia	NC	12.0	Indonesia	52.1	E	73.9	22	51.2	107	52.0	96	48.3
109	Air Algerie	NC	8.8	Algeria	50.4	E	56.0	94	50.7	109	44.2	102	47.4
110	Ethiopian Airlines	NC	20.0	Ethiopia	50.3	E	53.5	101	50.3	110	50.2	97	53.6
111	Emirates	NC	56.5	Un. Arab Emirates	48.6	E	39.8	109	48.3	112	48.7	98	59.7
112	Aerolineas Argentinas	NC	13.1	Argentina	43.6	E	43.5	108	43.6	113	--		43.2
113	Kuwait Airways	NC	4.7	Kuwait	42.9	E	65.9	63	48.8	111	39.0	103	43.8

Ranking Low Cost Carrier

Airlines	EC**
--	A
--	B
9 Air, Akasa Air, Flair Airlines, French Bee, Frontier Airlines, IndiGo Air, Jeju Airlines, Lion Air, Norse Atlantic Airways, Ryanair, Scoot, Wizz Air, Wizz Air UK	C
Air Arabia, Air Arabia Egypt, Air Arabia Maroc, Air Busan, Air India Express, AirAsia, AirAsia X, AJet, Allegiant Air, Avelo Airlines, Azul Airlines, Cebu Pacific Air, Citilink Indonesia, Easyjet, Eurowings, Fly One, Flydubai, Flynas, GOL Linhas Aéreas, HK Express, Indonesia AirAsia, Jazeera Airways, JetBlue Airways, Jetstar Airways, Jetstar Japan, Jin Air, Lucky Air, Norwegian Air Shuttle, Norwegian Air Sweden, Pacific Airlines, Peach Aviation, Philippines AirAsia, Ryanair UK, SalamAir, Southwest Airlines, SpiceJet, Spring Airlines, Sun Country Airlines, Super Air Jet, T'way Air, Thai AirAsia X, Thai AirAsia, Transavia, VietJet Air, Viva, Volaris, Volotea, Vueling Airlines, WestJet, ZIPAIR Tokyo	D
Interjet	E
--	F
--	G

Methodology and Background

atmosfair Airline Index 2026 Data

- 33 million flights analyzed
- Over 200 of the largest airlines worldwide evaluated
- 30.674 city pairs covered globally
- 92 % of global aviation included
- 169 aircraft types (97 % market coverage)
- 482 engines (96 % market coverage)
- Renowned, independent data sources: CH-Aviation, ICAO, IATA, OAG, FlightGlobal, and others
- Data year: 2025

Methodology of the Atmosfair Airline Index (AAI)

The fundamental unit of measurement is the CO_2 efficiency of flights (CO_2 emissions per passenger-kilometer). Since CO_2 efficiency naturally varies across short, medium, and long-haul flights due to physical constraints (discussed in the next section), it is converted into efficiency points for accurate airline comparison.

Steps in calculating an airline's efficiency points:

1. The CO_2 emissions per payload kilometer are calculated for each individual flight, factoring in: aircraft type, engine type, passenger and cargo capacity and load factors (seat and cargo utilization).
2. The CO_2 emissions per payload kilometer for each flight are compared to the best possible flight scenario as defined by ICAO standards.
3. Efficiency points for each city pair are assigned, with the best-case scenario receiving 100 points and other flights rated relative to this benchmark.
4. For each airline, all city pair points are aggregated into a global average efficiency score.
5. Airlines are ranked based on their global efficiency points.

The AAI calculation uses the ICAO CO_2 calculation method, ensuring high accuracy with a confidence level of ±1.5 efficiency points (95%).

Detailed documentation of the CO_2 calculation method is available at:

https://www.atmosfair.de/en/air_travel_and_climate/atmosfair_airline_index/

Efficiency Comparison of Routes with Different Lengths

The CO_2 efficiency of flight routes is strongly influenced by the distance traveled. For short-haul flights, the high emissions generated during ascent to cruising altitude are distributed across fewer payload kilometers compared to medium-haul flights, resulting in higher average CO_2 emissions per payload kilometer. Conversely, on long-haul routes, carbon efficiency is lower than on medium-haul routes because aircraft must carry extra fuel, which remains unused until the latter stages of the flight. This variation makes it challenging to compare airlines operating flights of different lengths.

The AAI addresses this issue with an innovative method that accounts for these distance-related effects. In the AAI, airlines' performances are compared exclusively on identical routes (e.g., Paris–London), ensuring a constant flight distance for evaluation. In a subsequent step, these efficiency results are aggregated to calculate a global efficiency score for the airline (see previous section). This approach ensures that the resulting efficiency score reflects only the technical and operational CO_2 efficiency of the airlines, making them directly comparable from a climate perspective. The AAI's efficiency points (EP) measure how closely an airline approaches the optimal performance (e.g., best aircraft, most efficient engine, highest possible load factor, etc.). A perfect score of 100 efficiency points represents the best achievable outcome with current technology and operational practices.

Low-Cost Carriers

Low-cost carriers (LCCs) are included in the Airline Index using a different approach. They are assessed separately due to specific methodological features in calculating and evaluating their CO_2 emissions, which prevent a direct comparison with other airlines in terms of climate efficiency as measured by the AAI. However, at least the direct CO_2 emissions of LCCs can still be evaluated. To ensure passengers have access to this information, LCCs are represented in a simplified format within the AAI.

The key methodological differences are as follows:

1. Subsidies:

Many LCCs receive subsidies that enable them to operate flights at significantly lower prices than would otherwise be possible. These subsidies often result in the creation of additional flights, and thus additional CO_2 emissions, which ideally should be included in the climate balance of the subsidized airline. However, these emissions cannot be accounted for in the AAI. While other airlines may also benefit from subsidies in various forms, they typically do not use them to lower prices in a way that directly leads to increased CO_2 emissions.

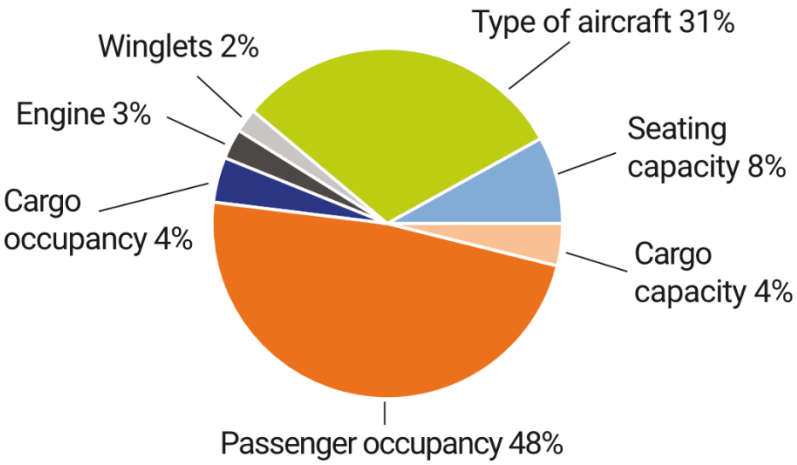
2. Detours:

LCCs frequently operate from regional airports, which often require longer journeys for passengers traveling to and from these locations compared to flights departing from and arriving at central city airports. These extended journeys lead to additional CO_2 emissions that should be considered in the rankings from a passenger-centric perspective.

It is important to note that not all LCCs are the same. atmosfair follows the definition and classification of LCCs provided by ATI, a service provider to the International Civil Aviation Organization (ICAO). The full definition and details can be found in the complete methodology documentation, available for download on the atmosfair website.

Where Do Individual Airlines Gain and Lose Efficiency Points?

Airlines achieve the best efficiency results when they operate modern aircraft optimized for the route distance and passenger load, configure the planes with a high number of seats, and utilize both the seating capacity and cargo space effectively. In essence, airlines that maximize seat availability and maintain high occupancy rates are the most efficient in transporting passengers. However, airlines prioritize different factors when tailoring their offerings to customers. While atmosfair does not assess or critique these priorities, it evaluates the resulting CO_2 emissions that are influenced by them.



Airlines can optimize various factors to improve their carbon efficiency. The chart illustrates which factors have the most significant impact on reducing carbon emissions when adjusted by one standard deviation.

How to Use the Airline Index

1. **Avoid**

- Even efficient flights can exceed an individual's annual climate-friendly CO_2 budget (2,300 kg per year for the two-degree target). Consider whether reasonable alternatives are available, such as traveling by train.
- Did you select a direct flight? (Rule of thumb: a direct flight in efficiency class E is generally better for the climate than a transfer flight in class C.)

2. **Optimize**

- The Airline Index provides information on an airline's efficiency, categorized by short, medium, and long-haul flights. Start by determining the distance of your flight, then identify the most efficient airline within the corresponding distance category.
- Typically, the airline with the highest efficiency points will be the most climate-friendly for your trip from A to B. However, since exceptions may occur, atmosfair offers detailed airline comparisons for companies, focusing on routes critical to their operations.

3. **Offset**

- You can offset the CO_2 emissions generated by your flight through atmosfair, which supports the development and expansion of renewable energy in developing countries. Make your contribution to climate protection online with the multiple award-winning service at: www.atmosfair.de