

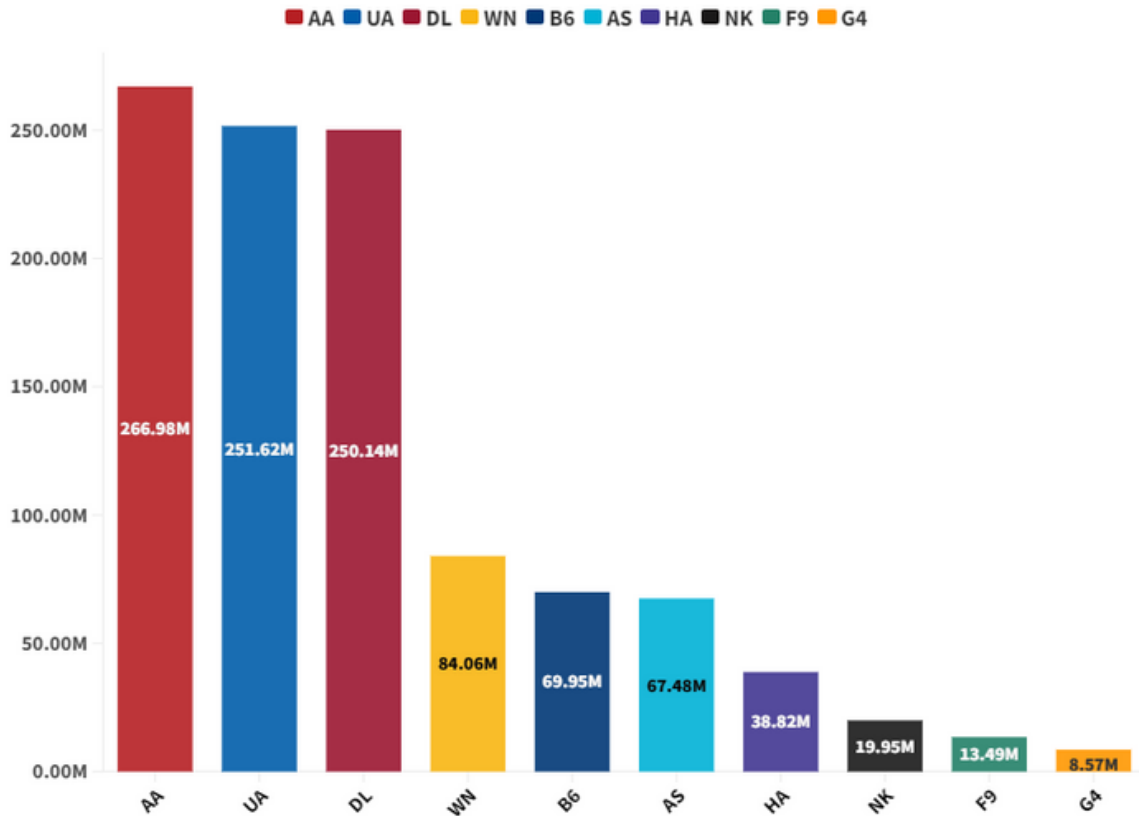
# U.S. Airlines Emissions Report

Recently hitting an all-time high, greenhouse gas emissions pose a serious threat, escalating global warming. It is no longer a question of whether we should address this issue but how urgently and innovatively we can collectively create solutions. Amid escalating global concerns, the aviation industry has set an ambitious goal to achieve net-zero emissions by 2050. Pursuing net-zero emissions requires rethinking traditional approaches, embracing cleaner technologies, and fostering partnerships to step into the new era of air travel.

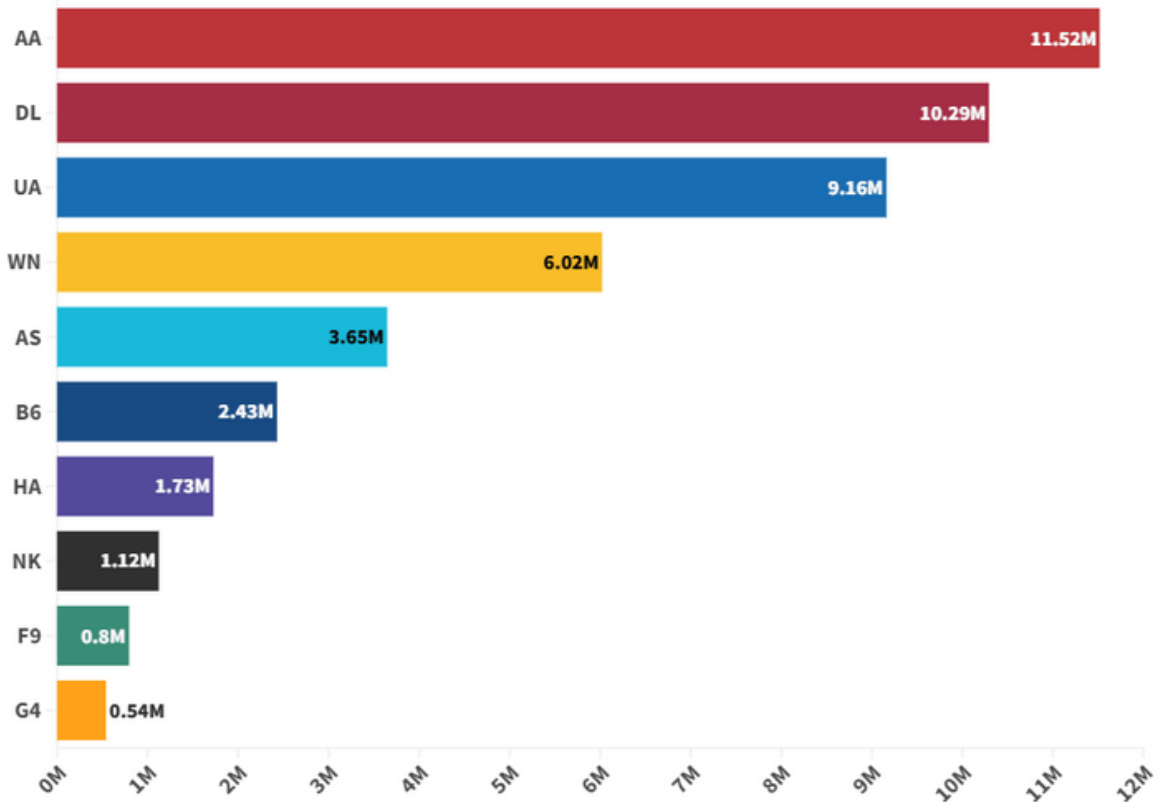
Major U.S. airlines contribute significantly to the overall carbon emissions, with the cumulative impact steadily rising. In 2019, U.S. domestic flights alone generated 150 million metric tons of CO<sub>2</sub>, nearly 3% of the country's total emissions. The projection is alarming, with Aviation Emissions expected to double by 2050, both within the U.S. and worldwide, given the anticipated rapid growth in air travel unless sustainable practices are prioritized.

Our algorithms and AI-driven tools present a comprehensive overview of the performance of Airlines in the U.S. from January 2019 to December 2023, covering aggregate emissions, total flight numbers, and cumulative emissions from diverse aircraft types.

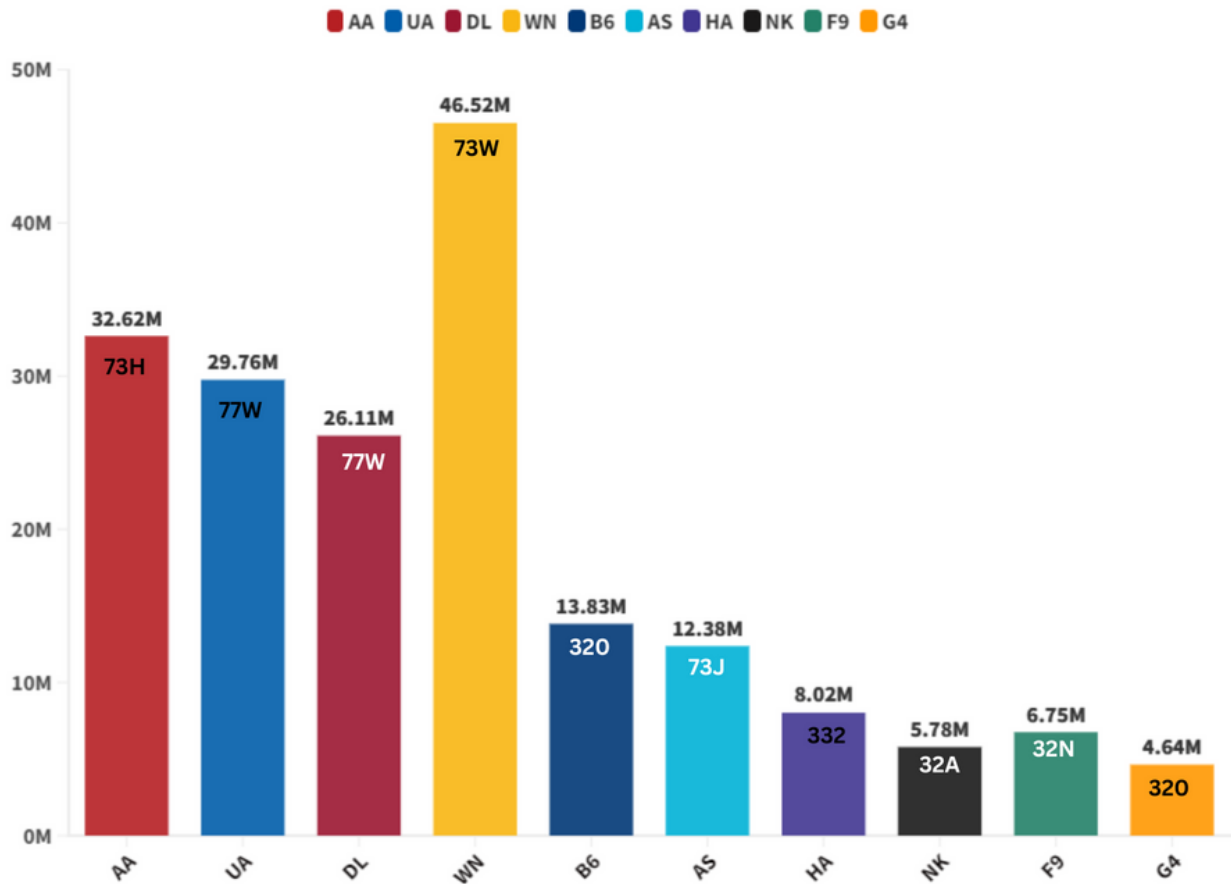
## Top 10 Airlines by CO<sub>2</sub> Emissions from Jan 2019 - Dec 2023 (In Million Tons)



## Airlines by Total Flight Count from Jan 2019 - Dec 2023 (In Millions)



## Top Emission-Producing Aircraft Types by Airline from Jan 2019 - Dec 2023 (In Million Tons)

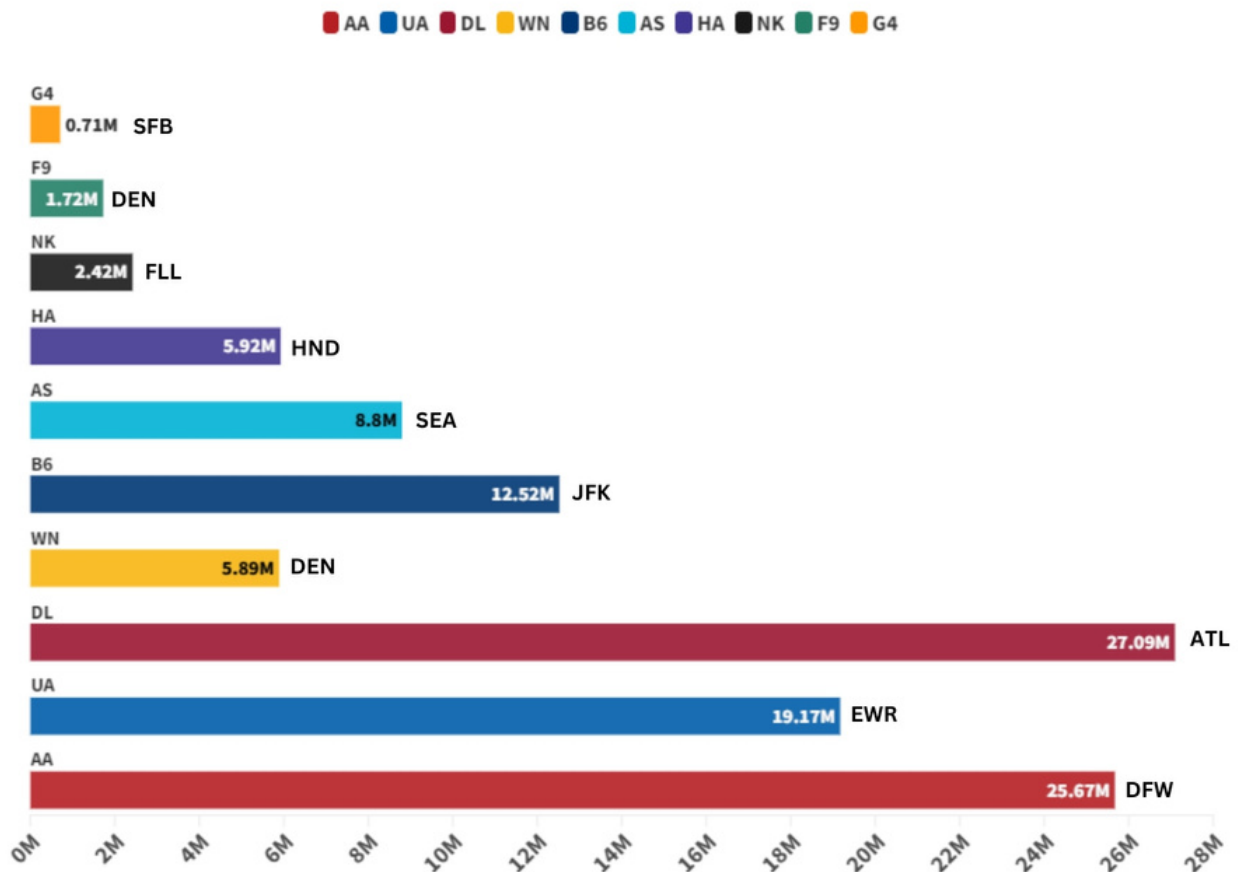


The overview indicates a clear connection between major airlines, their aircraft choices, and the consequential impact on CO<sub>2</sub> emissions. Specifically, American Airlines (AA), United Airlines (UA), and Delta Airlines (DL) emerge as primary contributors, signaling the need for targeted strategies to address emissions from these Airlines. Additionally, the influence of Southwest Airlines (WN) and JetBlue Airways (B6) underscores the significance of aircraft selection in shaping the overall environmental footprint.

## Highlighting Emissions Hotspots: Airlines and Their Key Departure Airports

Below is the graph highlighting the key departure airports and their corresponding emissions for each airline.

### Emissions by Airports and Airlines from Jan 2019 - Dec 2023 (In Million Tons)

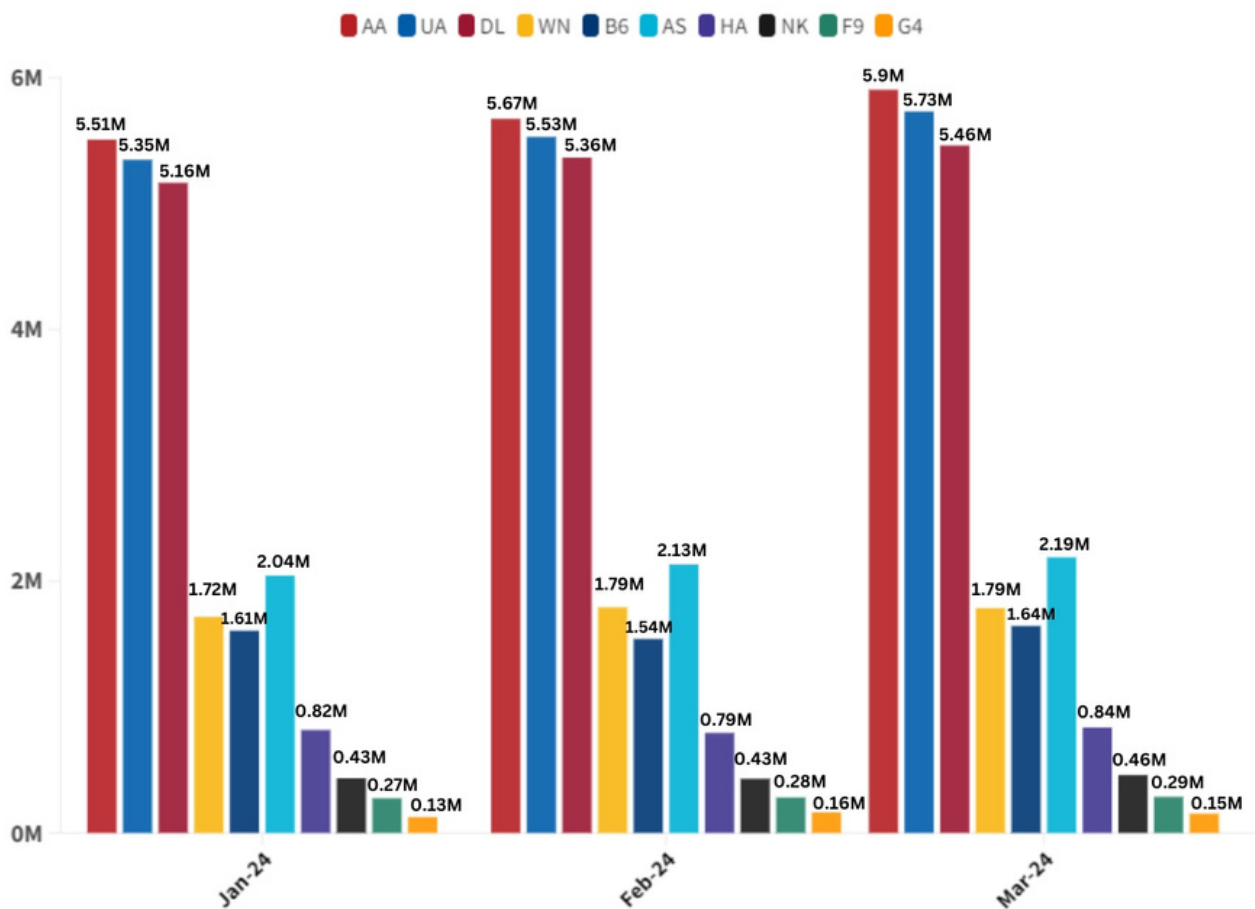


There are variations in emissions hotspots across airlines. Atlanta Hartsfield-Jackson International Airport (ATL) stands out as the leading departure hub, contributing the highest emissions, notably driven by Delta Airlines (DL). This underscores ATL's consistent prominence as the busiest airport since 2021, reflecting the significant environmental impact of Delta's operations.

## Airlines Emissions Prediction

The following graph provides a comprehensive insight into the emissions prediction for major airlines in the U.S., offering a glimpse into the anticipated carbon footprint from January to March 2024

**Predicted Emissions from Jan to Mar 2024  
(In Million Tons)**



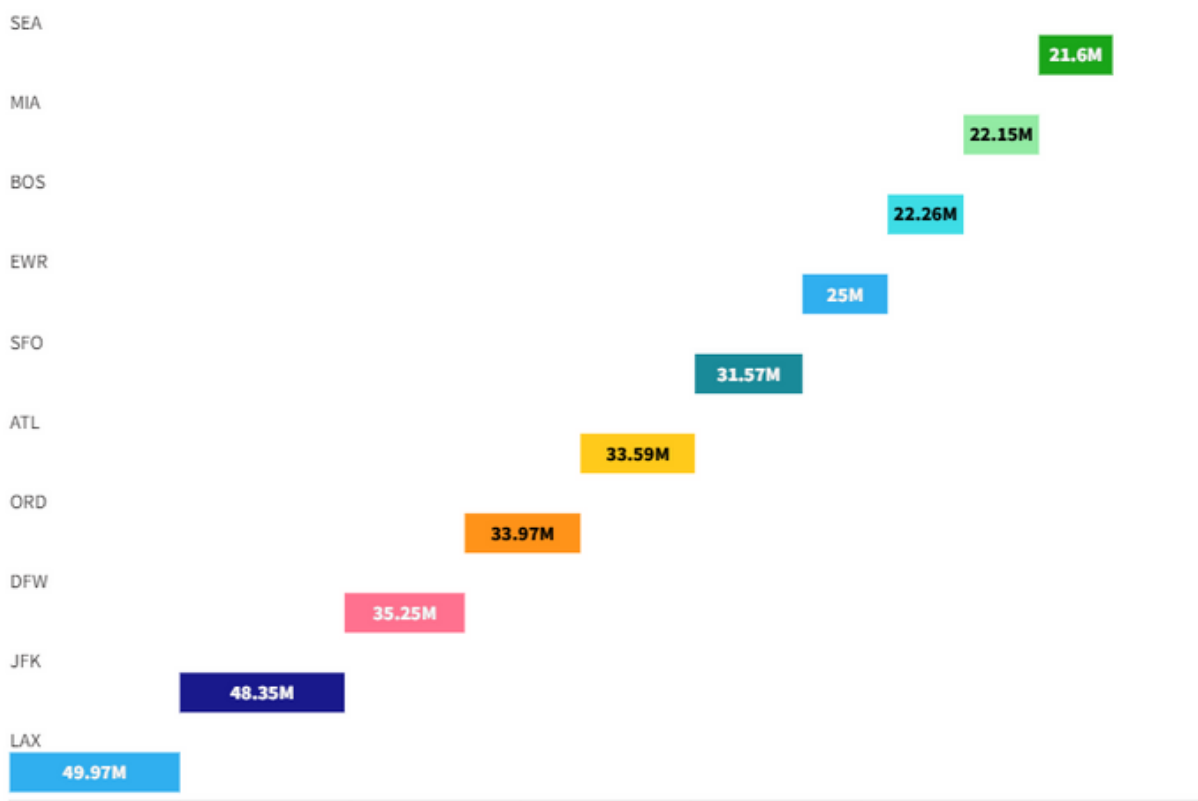
Based on our predicted data, it is evident the emissions for Airlines in the U.S. are on an upward trajectory. This calls for a heightened focus on implementing and accelerating emissions reduction strategies to address the industry's environmental impact and move towards a more sustainable aviation future.

# Airports in the U.S.

Airports play an important role in the current landscape of emissions in the U.S. To achieve the greater goal of the Aviation industry, to achieve net-zero emissions by 2050, demands a comprehensive transformation of airports, from converting ground fleets to electric vehicles (EVs) and electrifying building systems to on-site renewable energy generation and significant enhancements in energy and water efficiency, including innovative water reuse initiatives.

The current trends in airports' emissions are given below:

**Emissions by U.S. Airports- Top 10 from Jan 2019 - Dec 2023  
(In Million Tons)**



## Emissions by Routes - Top 10 from Jan 2019 - Dec 2023 (In Million Tons)

DEPARTURE AIRPORT	ARRIVAL AIRPORT	ESTIMATED CO <sub>2</sub> IN MILLION TONS
LHR	JFK	4.60M
JFK	LHR	4.00M
JFK	LAX	4.00M
LAX	JFK	3.47M
LHR	LAX	3.24M
LAX	LHR	2.99M
LAX	SYD	2.39M
JFK	SFO	2.38M
LAX	HNL	2.26M
SYD	LAX	2.23M

The data reveals that Los Angeles International Airport (LAX) and John F. Kennedy International Airport are consistently ranking high in both departure and arrival Emissions. This highlights their important position in connecting global air traffic, contributing significantly to the overall carbon footprint. Additionally, Transatlantic flights between LHR-JFK contribute the highest CO<sub>2</sub> emissions, while JFK -LAX and LAX - SYD routes also significantly impact carbon emissions, reflecting the environmental consequences of long-haul air travel.

As we witness an unprecedented rise in greenhouse gas emissions and the consequential escalation of global warming, the urgency to act has never been more apparent. Now is the time to accelerate sustainable practices, embrace cleaner technologies, and forge partnerships to mitigate the environmental impact of air travel and secure a healthier future for our planet.