

A Cost of Billionaires Report

# HIGH FLYERS 2023

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How Ultra-Rich Private Jet Travel  
Costs the Rest of Us and Burns  
Up Our Planet

May 2023

PATRIOTIC  
MILLIONAIRES

 Institute for  
Policy Studies

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**How Ultra-Rich Private Jet Travel Costs the  
Rest of Us and Burns Up Our Planet**

**MAY 2023**

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## OTHER RELEVANT RESEARCH

Since 2008, the IPS Program on Inequality and the Common Good has been analyzing the harms caused by private jets on our society and environment. Previous reports include:

- [\*High Flyers 2017: How the Private Jet Lobby Shifts Costs to the Rest of Us, Threatens Our Security, and Fuels a Warming Planet\*](#)
- [\*High Flyers 2008: How Private Jet Travel is Straining the System, Warming the Planet, and Costing You Money\*](#)

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### ***About the Patriotic Millionaires***

**The Patriotic Millionaires** is a group of high-net worth Americans, business leaders, and investors who are united in their concern about historic levels of inequality and the destabilizing concentration of wealth and power in America. The mission of The Patriotic Millionaires organization is to build a stable, prosperous, and inclusive nation by promoting public policies based on the “first principles” of equal political representation, a guaranteed living wage for all working citizens, and a fair tax system.

### ***About the Institute for Policy Studies***

The **Institute for Policy Studies** ([www.ips-dc.org](https://www.ips-dc.org)) is a multi-issue research center that has been conducting pathbreaking research on inequality for more than 20 years. The **IPS Program on Inequality and the Common Good** was founded in 2006 to draw attention to the growing dangers of concentrated wealth and power, and to advocate for policies and practices to reverse extreme inequalities in income, wealth, and opportunity. The project produces the **Inequality.org** website.

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## KEY FINDINGS

- **Private jets emit at least 10 times more pollutants than commercial planes per passenger.** Unsurprisingly, approximately 1 percent of people are believed to be responsible for about half of all aviation carbon emissions. In addition, since the start of the pandemic, private jet use has increased by about a fifth and private jet emissions have increased more than 23 percent, according to a recent study.
- ***Private jets make up approximately one out of every six flights handled by the Federal Aviation Administration (FAA) but contribute just 2 percent of the taxes that make up the trust fund that primarily funds the FAA. Instead, the majority (roughly 70 percent) of the tax revenue that makes up the aviation trust fund is financed by passengers purchasing commercial air travel. Passengers pay a 7.5 percent tax on the prices of their tickets plus a passenger facility charge of no more than \$4.50. Passenger taxes are increasing as flight prices increase. Meanwhile, private jet fliers only pay fuel surcharge taxes — roughly \$0.22 per gallon of jet fuel.***
- ***The median net worth of a full and fractional private jet owner is \$190 million and \$140 million respectively. They represent 0.0008 percent of the global population. The jet-owning oligarchy is overwhelmingly male, over the age of 50, and concentrated in the industries of banking, finance, and real estate.***
- ***The private jet sector set industry records with regards to transaction and dollar volume in 2021 and 2022. The size of the global fleet has increased 133 percent in the last two decades from 9,895 in 2000 to 23,133 in mid-2022. This bonanza was accompanied by an unprecedented number of business jet operations, 5.3 million in 2022.***
- ***A 10 percent and 5 percent transfer fee on preowned and new private aircraft would have raised \$2.4 billion in 2021 and \$2.6 billion in 2022. The size of the private jet market grew from \$32.3 billion in 2021 to \$34.1 billion in 2022, with the market only set to expand.***
- ***Elon Musk would pay an additional \$3.94 million in taxes if our recommended transfer fee and jet fuel tax were implemented. He is the most active high flyer in the United States. He purchased a new jet, took 171 flights, contributed to the consumption of 837,934 liters of jet fuel, and was responsible for 2,112 tons of carbon emissions in 2022.***
- ***Thousands of municipal airports in the US are funded by the public, but many primarily serve private and corporate jets. These airports may not offer scheduled passenger service, but they still offer airport runways subsidized by taxes.***

- *The largest player in the private jet lobby, the National Business Aviation Association, has spent an average [\\$2.4 million](#) each year since 2008 lobbying the federal government, primarily for tax giveaways. During the Covid-19 pandemic, the industry specifically [lobbied](#) for Covid relief, particularly “medium to long-term liquidity assistance and relief from air transportation excise taxes,” even though industry demand was quickly [climbing](#).*
- *The wealthy can transfer ownership of their jets to a private trust, obscuring the true ownership of the aircraft. In an age where commercial passengers must take off their shoes to be screened and fly, beneficial ownership of aircraft presents a fully legal yet significant security risk.*
- *While sustainable aviation fuels (SAFs) have a role to play in reducing aviation emissions, they should not be considered a panacea by the private jet industry. SAFs still release emissions, though less than traditional fuels, and they are currently expensive and rarely used.*

## INTRODUCTION:

### *The High Costs of Private Jet Travel to the Rest of Us*

Private jets have rightfully earned their reputation as symbols of excess. As society's wealth has concentrated in fewer hands over the last several decades, a period corresponding with the acceleration of inequality, there has been an explosion in private jet purchases and travel.

This is bad for both the earth — in terms of carbon emissions — and taxpayers who subsidize the private jet consumption of the ultra-rich.

Private jet excess has finally come onto the public and political radar, thanks to the efforts of Twitter accounts like the once suspended @CelebJets that publicly made available the daily private jet habits of the rich and famous. The large carbon footprint of the billionaire class has been documented by Oxfam, spurring climate and inequality activists alike to call for greater taxation and regulation of private aviation. Lawmakers in a number of countries are currently drafting or in the process of implementing legislation that would levy duties on the sale of new private aircraft, short flights, and emission outputs.

The private aviation industry has seen an unprecedented boom in the past two years. The preowned market, in particular, posted record numbers in terms of sales and revenue. The time is ripe to pass US legislation that would regulate and levy duties on private jet transactions and aviation since the industry is expected to grow at a steady pace over the next few years. Any taxes imposed will not affect 99 percent of us, and the revenue raised could be used to ensure we have a more environmentally sustainable planet.

### **BILLIONAIRE ELON MUSK TRIGGERS TURBULENCE ON TWITTER**

Elon Musk is no longer the world's wealthiest individual, but he is perhaps its most infamous and prolific private flier. His aerial activity — a little under one flight



every two days for a total of 171 flights — produced 2,112 tons of CO<sub>2</sub> emissions in 2022 alone.<sup>1</sup> This is 132 times more than the average carbon footprint of an individual resident in the United States.<sup>2</sup> And Musk has no intention of rolling back his use of private aviation. He recently added a new aircraft to his private collection with a \$78 million purchase of a Gulfstream G700.<sup>3</sup> This new jet is expected to take the place of model G50ER as his primary aircraft after it is delivered sometime this year.



*\*Recommendations found at end of report*

high-profile private jet owners in real time. Musk initially offered Sweeney a small sum of money to delete the account, but the offer was rejected.<sup>4</sup> After assuming ownership of the social media platform, Musk proceeded to use his newfound power to ban a number of user accounts, including @ElonJet and @JxckSweeney, after alleging that a stalker used the published data to find his exact location and threaten the safety of his family.<sup>5</sup> Musk now allows for private jet tracking on the condition that the information is published a day after it is recorded. Meanwhile, Sweeney has launched his own website to compete with ADS-B Exchange's database after it was acquired by aviation research firm JetNet in January.<sup>6</sup>

Musk's private jet activity garnered further international attention in December 2022 when Twitter, under the direction of CEO Musk, suspended a number of accounts belonging to user Jack Sweeney. Sweeney is a student programmer at the University of Central Florida who created several automated Twitter accounts that used publicly available information to track the flight paths of



## WHO ARE THE HIGH FLYERS?

Individual ownership of private aircraft provides society with a glimpse at who sits at the top of the global wealth distribution. After all, private jets are expensive toys with high operation and maintenance costs that are simply unaffordable for the median US household. To give just one example, the asking price for a new, light jet such as the Cessna CJ4 is \$4.8 million, and that is on the low-end of the spectrum.<sup>7</sup> Due to the expensive price tags of private jets, those in the market for such aircraft are naturally a small minority of individuals — those who succeeded at concentrating wealth at an extreme level.

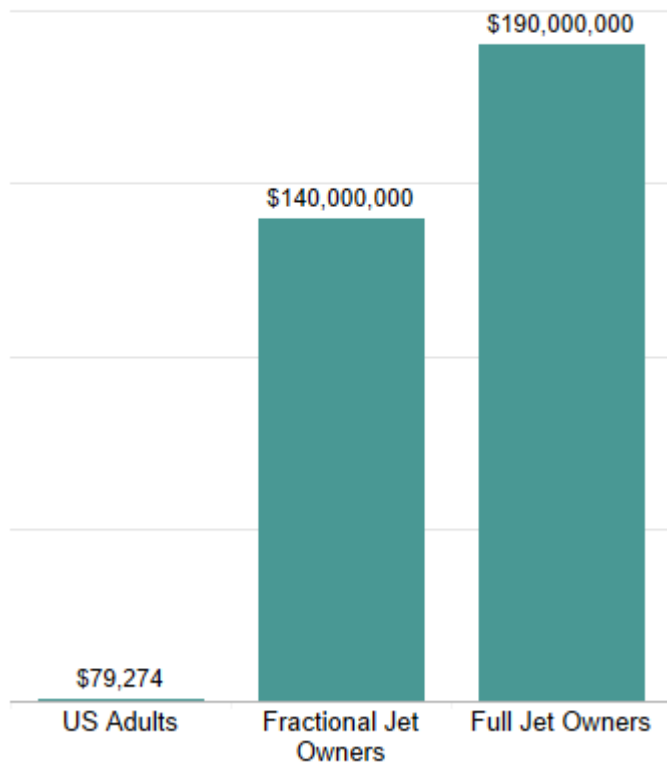
The profile of your typical private jet owner is a male over the age of 50, though a wave of first-time buyers under the age of 45 have ventured into the industry over the past couple of years. Jet owners' wealth comes from diverse sources, though owner occupations are largely concentrated in the banking, finance, and real estate industries.<sup>8</sup> These business tycoons reside primarily in North America (Canada, Mexico and the US account for about 70 percent of the private jet market) with Europe a distant second.

When purchasing private aircraft, the ultrawealthy can opt for either full or fractional ownership. Fractional ownership is an option that individuals and business entities explore if they wish to save money and not extravagantly spend (tens of) millions of dollars on a new or preowned private jet. Instead of establishing full ownership of an aircraft, fractional owners sign a contract through which they purchase only a share of a plane, and are not responsible for upkeep and other logistical requirements and associated costs.

The difference in wealth between these two types of owners, however, is not very significant. The median net worth of a full private jet owner is \$190 million while the median net worth of a fractional private jet owner is \$140 million.<sup>9</sup> There were only 63,610 people in the world with a net worth of \$100 million or more.<sup>10</sup> This means that the median jet owner represents roughly 0.0008 percent of the globe's population.<sup>11</sup>

## Median Wealth of Jet Owners

Median wealth of fractional and full jet owners  
vs. that of all US adults



Source: Credit Suisse and Wealth-X

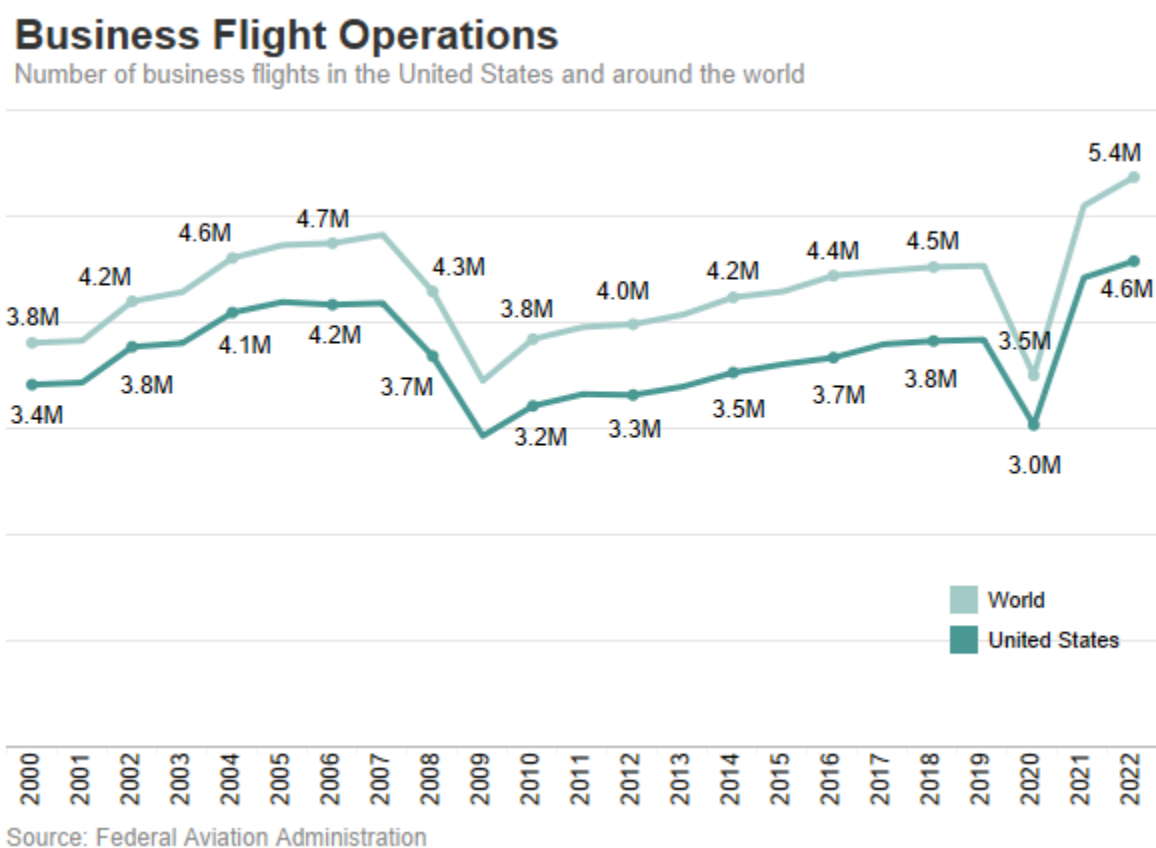
But an ultrahigh net worth individual does not need to own a jet, whether full or fractional, in order to join the exclusive club of high flyers. An additional option are membership programs known as Jet Cards where an individual or business forgoes any long-term financial commitment or obligation by prepaying for the number of hours they wish to privately fly. On-demand chartering requires even less of a commitment by giving high flyers the option to book individual private flights. Regardless of the ownership structure or the programs utilized, one thing is absolutely clear: the world's high flyers consist of a small group of ultrahigh net worth individuals.

## ***ANALYSIS: US Business Aviation Traffic and Market***

The Covid-19 pandemic and the lockdown orders that followed caused a dramatic collapse in the demand for global aviation. The result was a gargantuan economic loss of \$168 billion for the airline industry in 2020.<sup>12</sup> The economic pain, however, was not equally distributed across the aviation sector. Demand for private flights quickly rebounded and there are now more business jet operations today compared to any other period before 2020. The pre-pandemic apex — in the twenty-first century at least — was 2007 with a total of 4.8 million private flights. Domestic

operations inside the US made up 87 percent of this total. But the 2007 peak has been eclipsed by more than half a million in 2022, bringing last year's total to 5.3 million.<sup>13</sup>

Business aviation's current recovery is interesting since a similar collapse in flight operations occurred shortly after the Great Recession when flight activity dropped to 3.4 million in 2009. While the trajectory has gradually trended upwards ever since, it never reached its pre- Recession levels until 2021! This demonstrates that additional factors like the fear of contracting the coronavirus, the desire to steer clear from the hustle and bustle of airports, and flight flexibility were driving demand.



This has manifested itself in three ways. First, private aviation is capturing a bigger share of air traffic in the United States. The Federal Aviation Administration (FAA) handled 16,405,000 flights in FY2019.<sup>14</sup> Private jet flights accounted for 15.8 percent of these operations—approximately one in six US flights.<sup>15</sup> The three most popular airports in the United States for

domestic private jet operations are Teterboro Airport in New Jersey, Palm Beach International Airport in Florida, and Dallas Love Field in Texas. With a decrease in flight operations by commercial airliners to smaller regional airports, private aviation has also filled a crucial gap by providing services at those locations these past three years.<sup>16</sup> Second, the entry of newcomers put a lot of pressure on the private aviation market who found it difficult to meet the remarkable growth in demand. Staff and fuel shortages and an unprecedented number of flight delays led to increased costs to the chagrin of the high flyers.<sup>17</sup> One of the main benefits of flying private is its predictability yet that guarantee was vetoed in 2021. The market, however, is beginning to stabilize after a hectic two years.<sup>18</sup>

And third, we witnessed a period of robust growth for business aviation. Transaction volume is up and the size of the private jet fleet is slowly expanding. Just like every industry in the economy, business aviation was impacted by the pandemic. Supply chain disruptions impeded the production of new jets, but preowned transactions set new industry records in 2021. The numbers differ slightly depending on the source, but the total transaction value of the more than 2,400 preowned jets sold was between \$14.5 billion to \$16.7 billion.<sup>19</sup> Even though the total number of transactions of preowned and new aircraft was down in 2022, the total dollar volume — \$34.1 billion — actually exceeded the previous year, rising by 5.5 percent because of increasing aircraft prices.<sup>20</sup>

The tendency for the jet-owning oligarchy to purchase preowned aircraft these past three years is driven by the lack of new inventory, interest rate hikes by the Federal Reserve, and as a preemptive strategy to avoid paying new taxes.<sup>21</sup> Canada passed a 10 percent luxury tax on new aircraft manufactured after 2018. Preowned aircraft are subject to the tax, but exceptions exist if they meet certain criteria.<sup>22</sup> This strategy from the ultrawealthy highlights the need to not exempt preowned aircraft from any new duties, especially since older models are even less fuel-efficient than the newer ones.

The bonanza of 2021 was exceptional. The market in 2022 was equally impressive. And there is a consensus that the principles of supply-and-demand in the industry are sound. The forecast indicates steady growth for the next half-decade. Manufacturers saw an increase in order placements and are expected to ramp up production to churn out new aircraft. This will add to the

ever expanding global fleet, which has grown substantially in the twenty-first century. One estimate counted 9,895 private jets in the year 2000.<sup>23</sup> The total fleet as of last June was 23,133.<sup>24</sup> This is a 133 percent increase in 22 years with an average addition of 602 new aircraft per year.

A larger carbon footprint is the logical consequence of a growing fleet of private jets, but it is also an opportunity for lawmakers across the globe to raise significant revenue through the imposition of a tax regime that resembles Canada’s luxury tax. We recommend a 10 percent tax on all preowned transactions and a 5 percent tax on all new aircraft sales. The table below demonstrates that a total of \$8.9 billion dollars in estimated tax revenue would have been collected if this tax regime were in place in 2019.<sup>25</sup> The year 2022 alone would have yielded \$2.6 billion in tax revenue.

#### Global Business Jet Sales, 2019-2023

All sales and revenue amounts are shown in the millions of dollars

Year	Pre-owned jet sales	Revenue that would have been generated by a 10% tax on pre-owned jet sales	New jet sales	Revenue that would have been generated by a 5% tax on new jet sales	Total jet sales	Total revenue generated by jet sales taxes
2019	\$11,400	\$1,140	\$16,900	\$845	\$28,300	\$1,985
2020	\$11,800	\$1,180	\$14,200	\$710	\$26,000	\$1,890
2021	\$16,700	\$1,670	\$15,600	\$780	\$32,300	\$2,450
2022	\$19,100	\$1,910	\$15,000	\$750	\$34,100	\$2,660
2023 (Forecasted)	\$15,700	\$1,570	\$18,900	\$945	\$34,600	\$2,515

Source: IPS analysis of data from Global Jet Capital

# THE ENVIRONMENTAL EQUATION

## *Emissions*

Global aviation is currently responsible for approximately 3.5 percent of human-driven climate change.<sup>26</sup> This measure includes carbon emissions, nitrogen emissions, exhaust plume clouds, soot, and other factors, but by far the most dangerous and most prevalent greenhouse gas is carbon dioxide. In contrast to other pollutants, carbon emissions remain in the atmosphere for hundreds of years. Aviation's carbon emissions alone account for 2.4 percent of global carbon outputs, as of 2018.<sup>27</sup>

While just a small portion of these carbon emissions are due to private jet use — an estimated 4 percent, according to a 2020 study using pre-pandemic data — there is a stark imbalance between a jet carrying at most a handful of people, or carrying no one in some cases, versus a commercial aircraft loaded with hundreds of passengers.<sup>28</sup> As a result, multimillionaires and billionaires are responsible for a highly disproportionate amount of carbon emissions from air travel. A recent report by Europe-based advocacy group Transport & Environment found that, on average per passenger, private jets contribute to carbon pollution at a rate 10 times that of commercial airliners.<sup>29</sup> As private aviation increases in popularity, the emissions gap between an extremely wealthy jetsetter and the average traveler is only widening.



As mentioned above, use of commercial aviation decreased during the Covid-19 pandemic and the number of private flights soared. It is much easier to keep one's social distance and avoid contracting the virus on a plane if one is the only passenger. The ultrawealthy could avail themselves of the option to travel private and keep themselves protected from disease. The number of private flights taken in the US grew by approximately 20 percent after the start of the pandemic and,

according to a recent study, this growth in private aviation resulted in a 23 percent increase in carbon emissions.<sup>30</sup>

## ***Sustainable Aviation Fuels***

The private jet industry is very much aware of the campaigns waged by climate activists who call public attention to the frequent use of private aviation and its negative impact on the environment. The industry has attempted to deflect climate criticism by claiming they are suited to lead decarbonization efforts as they are in the process of developing sustainable technology. Many in the business aviation industry believe that the solution lies with the production and adoption of sustainable aviation fuels (SAFs), an umbrella term for any aviation fuel that meets certain sustainability criteria and thus may contribute fewer emission outputs than fossil fuels. According to a report by the International Council on Clean Transportation (ICCT), SAFs will play a major role in the decarbonization of aviation over the next few decades. The ICCT predicts that SAFs will be responsible for the majority of mitigated aviation emissions (somewhere between 59 and 64 percent), as compared to the mitigation effects of demand change, operational and technical efficiencies, or zero-emission planes.<sup>31</sup>

SAFs do not require much change to the industry beyond that of switching fuels, so one can imagine how their development and production will be fundamental to business aviation's climate plans. However, SAFs are much more expensive than conventional aviation fuels — costing as much as three to five times more — and as a result, they are rarely used.<sup>32</sup> For instance, approximately 33 million gallons of SAFs were purchased in 2021 for a total cost of \$250 million; this translates to about 0.1 percent of total aviation fuel purchases.<sup>33</sup> Still, any use of SAFs can be used to bolster private aviation's environmental reputation. “Biofuel turns private aviation from a public relations nightmare to an environmental calling card,” reads the website metadata of alternative fuel company Gevo, describing the purpose of a webpage devoted to highlighting private aviation's use of SAFs.<sup>34</sup>

SAFs are indeed considered to be important in a green energy future. US policies to incentivize the use of SAFs are currently focused on ramping up SAF development and production. In 2021, the Biden administration announced the Sustainable Aviation Fuel Grand Challenge, a federal,



cross-agency effort to bring SAFs to scale. The challenge has annual production goals of 3 billion gallons of SAFs by 2030 and 35 billion gallons (100 percent of US aviation fuel demand) by 2050, significantly more than the current production of 4.5 million gallons per year.<sup>35</sup>

SAFs indeed produce fewer emissions when burned than traditional fuel. The Biden administration determined that for a jet fuel to qualify as an SAF, it has to achieve “a minimum of 50% reduction in life cycle [greenhouse gas] emissions compared to conventional fuel.”<sup>36</sup> All else being equal, the adoption of such a fuel would represent a substantial drop in emissions, but additional variables will determine how the use of SAFs will actually affect total emissions. For example, successfully ramping up the production of SAFs will increase the supply of all jet fuel and push fuel prices down, but it will also likely stimulate an increase in air travel due to these lower costs. On the other hand, if SAFs could possibly *fully* replace traditional jet fuel, fuel prices may not fall and air travel could decline.

In addition, some alternative fuels could potentially lead to even more harmful public health effects. ProPublica recently published a report on how the Environmental Protection Agency recently approved a Chevron plan to make jet fuel derived from plastic waste. However, the production of at least one of Chevron’s planned fuels would emit toxins that could lead to one out of four people in the refinery area getting cancer over their lifetimes (a risk 250,000 times greater than what the EPA usually approves).<sup>37</sup> Plastics themselves are created from fossil fuels and release toxins into the atmosphere when burned.

It is clear that while SAFs have a role to play in the transition to clean energy, they are by no means a panacea, particularly for the private jet industry. In order to achieve a net-zero emissions future for aviation, SAFs and energy-efficient aircraft are necessary, but there will also need to be a reduction in the demand for air travel.

## ***Other Travel Options***

No one needs a private jet to travel from point A to point B. Other transport options contribute fewer carbon emissions and are thus better for the environment. Importantly, private jet flights are often *short*. And some private jet flights are *extremely* short; in 2022, socialite and cosmetic

entrepreneur Kylie Jenner went viral for a 17-minute flight.<sup>38</sup> Many celebrities are known for taking short trips that could have easily been taken via a carbon-neutral mode of transportation.<sup>39</sup> And while the extremely rich may deride the possibility of traveling with the public, bus, rail, or even commercial air travel is almost always more energy efficient than flying privately. In the table below, we present alternatives to private air travel for a popular route, that of New York to Washington, D.C. These estimates suggest that a passenger on a private jet is responsible for approximately 45 times as many emissions as a passenger on a commercial plane flying the same route, and more than 1,100 times the emissions of a train passenger.<sup>40</sup>

Private Aviation and Its Alternatives		
Route: New York City (JFK) to Washington, DC (DCA), 210 Miles		
Travel Mode	Travel Time	Estimated CO <sub>2</sub> Emissions/Pax
Private aircraft	1.5 hours	7,913 lbs
Commercial aircraft	1.5 hours + 2 hours security	174 lbs
Train	3.5 hours	7 lbs
Bus	4 hours	88 lbs

Source: emissions calculators provided by Paramount Business Jets, Carbon Footprint, and the International Civil Aviation Organization

## HOW DO THE HIGH FLYERS USE THE AIR SPACE?

While private jet owners contribute significantly to the output of carbon emissions, they do so per the use of public air space — and its associated network of public airports and air traffic control — while offering little in compensation to the public. The navigable airspace above us is part of the public domain; it is much like a public highway except that, unless you have the funds, you have to pay a lot of money to be jammed between strangers as you travel.<sup>41</sup>

General aviation, including private jets, make use of the country's vast network of airports. There are approximately 500 commercial airports across the US that offer scheduled passenger service. But there are more than 5,000 public airports nationwide. The vast majority of public airports — nearly 3,000 — are general aviation airports.<sup>42</sup> These airports do not service commercial flights or have scheduled passenger service. Some are used primarily for military or agricultural flights, or they host flight schools. Others are simply convenient stops along the arteries that the rich travel.

Because these are public-use airports, they receive a significant amount of investment from the taxpayer. The FAA grants general aviation airports public funds through the Airport Improvement Program each year. This program is funded through the FAA's Airport and Airways Trust Fund (AATF). This trust fund makes up the bulk of FAA funding, and the bulk of *it* is funded by commercial passenger taxes and fuel taxes. General aviation flights do not pay commercial passenger taxes. Instead, those taking such flights are obligated to pay duties on fuel. Jet fuel taxes made up \$186 million of the more than \$8 billion in tax revenue that was allocated to the AATF in FY2021, or about 2 percent of the fund's total tax revenue.<sup>43</sup> Meanwhile, more than half of the AATF's tax revenue — \$5.32 billion — came from passenger taxes.<sup>44</sup>

Anyone who takes a commercial flight has to pay passenger taxes. These taxes equal 7.5 percent of the ticket fare, in addition to a fee of no more than \$4.50. As commercial flight prices increase, taxes on passengers (and the tax revenue collected) also increases. However, fuel prices — and thus the fuel taxes levied on the jet-owning oligarchy — have remained relatively constant.<sup>45</sup> This means that not only do commercial passengers contribute much more than private jetsetters to the

FAA trust fund, but also that commercial passenger taxes have been increasing over time, while private jet passenger contributions remain comparatively static.

The small group of ultrahigh net worth individuals who fly private also benefit from the country's air traffic control system. Air traffic controllers provide an essential service by managing the flow of air traffic and ensuring there are no airborne collisions. However, approximately one out of six flights that the FAA's air traffic control handles is a general aviation turbojet flight (i.e., a private jet flight), even while these flights pay roughly 2 percent of the tax revenue that makes up the Airport and Airway Trust Fund. In effect, commercial passengers subsidize the carbon and convenience of the High Flyers.



At the time of writing, there have been five instances in the first three months of 2023 when unauthorized private jet operations have jeopardized the safety of our skies. The most recent example occurred at Boston Logan Airport where a Learjet — despite being told by air traffic control to stand by and not depart — decided to take off just as a JetBlue airplane was attempting to land. The unsanctioned decision taken by the private aircraft almost resulted in a collision, but disaster was avoided thanks to action taken by commercial airline pilots.<sup>46</sup> Meanwhile, House Republicans are currently threatening the safety of our airspace by pledging to decrease FAA funding in their upcoming budget proposal. This has the potential to result in layoffs of air traffic controller workers, leading to less secure skies and longer wait times for commercial passengers at large and busy airports.<sup>47</sup>

## ***General Aviation Airports***

There are thousands of public-use, general aviation airports across the country, and it is likely that you may live near one. It is less likely that you have actually used it.

Often located in mid-size or rural areas, these airports are meant to connect less-populated areas of the country to air transportation routes. They are also regularly seen as sites of economic development for the communities in which they are located, especially in more rural areas where industrial and other jobs have vanished and economic distress has taken its place. However, the extremely wealthy use these general aviation airport locations to their advantage.

The Nemaquin Resort located in rural Farmington, Pennsylvania is a prime example. Rooms usually cost at least \$500 a night, but during peak dates and times, they can usher in prices as high as \$1,000 per night. The resort is a playground for the rich and guests enjoy great amenities. There are two championship golf courses, a casino, a handful of fine dining restaurants, and two spas. Nemaquin guests flying commercial have to fly into Pittsburgh International Airport in order to get to Farmington, but this airport is about an hour and half's drive away! But if you have access to a private jet, no problem. Guests can avoid this inconvenience and utilize Nemaquin's private airstrip. The airstrip is not very big, however, so visitors to Nemaquin can also opt to use the Connellsville Airport, just 18 miles from the resort. Though the Nemaquin website advertises Connellsville as a "private airport," it is not.<sup>48</sup> It is a general aviation airport funded by public dollars yet it offers no scheduled passenger service. The airport also receives private donations. A notable contribution was made by the late Joe Hardy, who donated \$800,000 in 2007 to improve the airport's runways. In fact, the Connellsville Airport's official name is Joseph A. Hardy Connellsville Airport.

Who is Hardy? Before his death in January 2023, Hardy was a billionaire — worth \$1.1 billion according to Wealth-X — who owned 84 Lumber, the hardware store chain, as well as Farmington's Nemaquin Resort.

Other public-use airports favored by the rich include one of the busiest general aviation airports, Van Nuys Airport in Los Angeles; Reno-Stead Airport, which offers access to wealth management heavyweight Nevada; as well as Bandon State Airport near the upscale Bandon Dunes Golf Resort on the southern coast of Oregon.

The private jet industry regularly harps on the point that general aviation is integral to the economies of small communities, just as the extremely wealthy point to family farms to argue against the estate tax. Small communities are more sympathetic than billionaires; family farmers are more sympathetic than billionaires. But in the same way family farms are not likely subject to the current federal estate tax, small communities are not the biggest beneficiaries of private jet travel, which is just one component of general aviation. After all, the vast majority of general aviation aircraft in the US are light, single engine planes; in 2021, single engine aircraft flew more than 2.5 times as many hours in total as private jets did (at a fraction of aviation fuel consumed).<sup>49</sup> Those who most benefit from private jet travel are obviously the multimillionaires and billionaires who utilize it and, of course, the industry itself.

# THE SECURITY RISKS OF PRIVATE JET TRAVEL

Commercial aviation passengers are subject to extraordinary security measures when they travel commercial. While the public must go through metal detectors and radiation screenings, those who fly private face very little scrutiny. Passengers on private aircraft can drive up directly to their business jet and carry their weapons and other items forbidden by the Transportation Security Administration (TSA). Their names are checked against a flight register, but the process is much weaker than what commercial passengers regularly experience.

Why does this matter? For one, members of our security services like the former Secretary of Homeland Security Michael Chertoff believe that future threats to our national security will not occur via commercial aviation, but through the use of privately owned jets and planes. And secondly, a security regime with such minimal surveillance may overlook serious safety and security issues, especially when we take into consideration the growth of business jet operations and the wave of newcomers who entered the private aviation market as passengers for the first time within the past three years. European Union officials have expressed concern over the “light touch” security approach with regards to private aviation.<sup>50</sup>

Nevertheless, the private jet lobby has successfully fended off TSA oversight to protect their voluntary security regimes and block increased security provisions that ensure minimum oversight of private jet owners and passengers. Whenever the TSA or other regulatory bodies suggest increased security measures on business aviation, the private jet lobby mobilizes their powerful and politically influential network to make certain that they are free from such provisions.

The private jet lobby has also worked to protect the secrecy of private jet owners and operators; private aviation has not imposed transparency provisions that discourage the purchase of business jets by shell companies and trusts. As a result, the beneficial owner of such aircraft is not known and anonymous ownership has the potential to constitute a security risk.



## Anonymous Ownership

While the extremely wealthy can easily retain anonymity by flying privately via fractional ownership, outright ownership of a private jet is more difficult — yet very possible — to obfuscate. Keeping ownership hidden from the public and sometimes even law enforcement is simple: all that is required is an owner trust where a third party will hold the legal title of the aircraft for the benefit of the true owner. Any plane operating in the US, including those owned by non-citizens, can be registered with the FAA as long as the registered owner is a US person or a US legal entity. Therefore, the registered owner can easily act as a veil to ensure ownership secrecy, whether the owner listed on the FAA registration form is a trust company or a shell company.

Indeed, a 2018 investigation by *The Boston Globe* found that approximately one in six private aircraft registered with the FAA is registered through a trust, a Delaware corporation, or a P.O. box, tactics frequently used to conceal the identity of an aircraft's owner.<sup>51</sup> We cannot know how many planes are registered to noncitizens using trusts as the FAA does not monitor this information.

Though the FAA oversees the registration of approximately 300,000 general aviation aircraft, the FAA does not investigate the accuracy of the information provided on plane registration forms due to limitations in the agency's resources.<sup>52</sup> A 2020 US Government Accountability Office (GAO) report found that the FAA's failure to verify key information such as owner name and address increases the risk of aircraft-related fraud and abuse.<sup>53</sup>

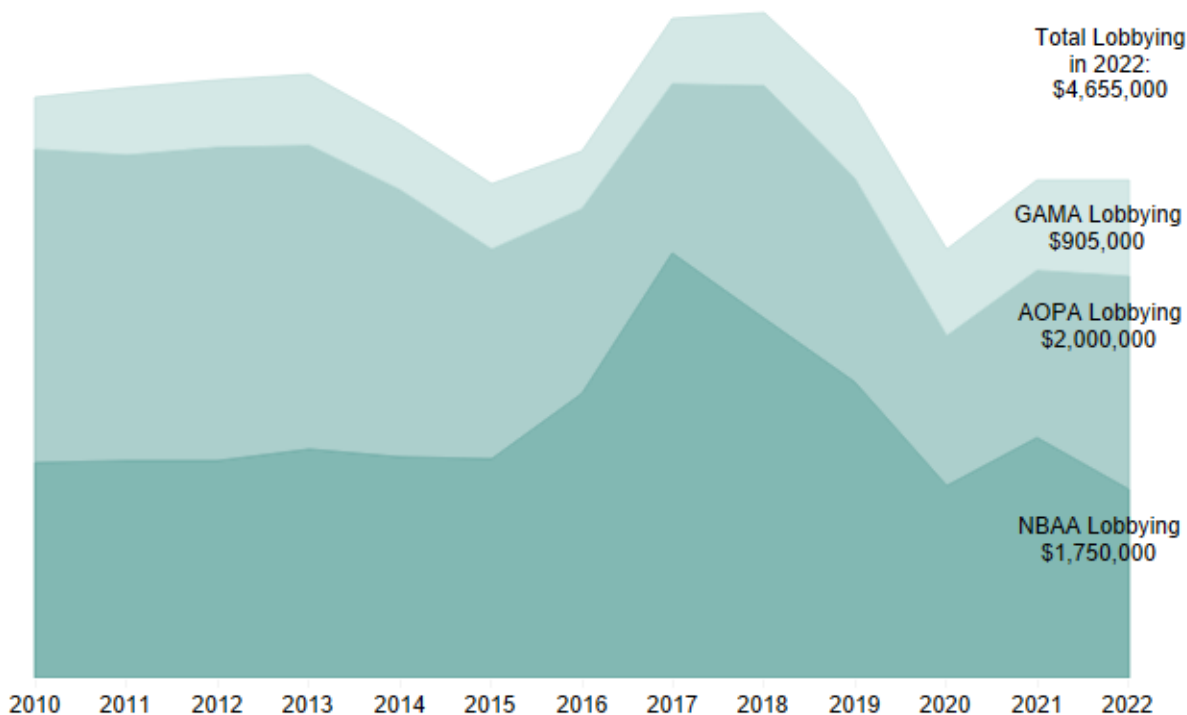
Because of lax requirements, aircraft can be used to transport illegal goods such as narcotics (US-registered planes have been tied to illegal drug cartels for decades) or, as planes are expensive assets, used to launder illicit funds through sales transactions. For example, the GAO report includes a case study of a US corporation with a Venezuelan beneficial owner that purchased an aircraft with laundered money. The aircraft was then registered with the FAA through another corporation in the interests of the Venezuelan beneficial owner. Eventually, the aircraft was seized by law enforcement because it was purchased using illicit funds. In addition, law enforcement cite the lack of accessible information in the FAA registry as an impediment to their investigations.<sup>54</sup>

In 2017 and 2019, members of Congress from both parties introduced the Aircraft Ownership Transparency Act. This law would require greater disclosure of beneficial ownership of private aircraft, arguing that secrecy of private jet ownership puts the US at risk. However, within each session, the bill died in committee.

## THE LOBBYISTS BEHIND (AND IN) PRIVATE JETS

The private jet lobby — a network of several associations that represent the interests of private jet owners, manufacturers, and pilots — has aggressively worked to defend taxpayer subsidies and fend off any regulation of private jets.

### Lobbying Expenditures for Private Jets, 2010-2022



Source: OpenSecrets

The three biggest trade associations representing private jets spent nearly \$68 million combined on lobbying to protect their interests over the last 12 years. The big three include the Aircraft Owners and Pilots Association (AOPA) that represents pilots and private jet owners; the National Business Aviation Association (NBAA) that represents corporations with private jets; and the General Aviation Manufacturers Association (GAMA) that represents private jet manufacturers. Other major associations that also contribute to private aviation lobbying efforts include the

Alliance for Aviation Across America, a general aviation advocacy coalition, and the National Air Transportation Association, a group of general aviation businesses.

In 2017, the Trump administration passed the unpopular Tax Cuts and Job Act of 2017.<sup>55</sup> The business aviation industry lobbied in favor of the legislation and the NBAA set an institutional record by spending nearly \$4 million in lobbying funds that year.<sup>56</sup>

One of the tax subsidies the private jet lobby won was a bonus depreciation provision for qualified assets that enabled private jet owners who use their jets for business to immediately realize the benefits of depreciation — that is, they could write off 100 percent of the cost of a used or new jet in the year of purchase, instead of depreciating the aircraft over the (also exaggerated) IRS standard of five years.<sup>57</sup> (In 2013, President Barack Obama attempted to extend private jet depreciation to seven years to match that of commercial airliners, but faced vigorous opposition from the private jet lobby.<sup>58</sup>) While the bonus depreciation provision begins to phase out as of 2023, it is still rather generous until 2027, when traditional depreciation rules will once again apply.<sup>59</sup>

In 2008, the private jet lobby worked to quash the findings of our first report on private jets, which it called “think tank propaganda” that was “a rehash of the big airlines’ discredited attacks on general aviation aircraft that are a lifeline to small towns and communities.”<sup>60</sup> The lobby aimed to control the narrative around private jets by decentering the multimillionaires and billionaires that purchase, use, and benefit from private jets, instead pointing to the small communities that may be served economically from all general aviation airport activities.

## HOW PRIVATE JETS WIDEN INEQUALITY

A key word when discussing the private jet industry is “private.” While business aviation technically falls under the regulatory purview of the FAA, regulatory requirements are much milder than that of commercial airlines. The effects boil over into both issues for workers in the industry as well as limited tax oversight of private jets and private jet companies. And though the industry serves the richest Americans, during the pandemic the private jet industry was keen to take advantage of federal relief funds intended for struggling small businesses.

One way the world’s wealthiest benefited from the Covid-19 pandemic — while the gaps of inequality widened — was through private jets, and not merely through their use. According to the government watchdog group Accountable.US, private jet companies received more than \$643 million from emergency aid programs as of January 2021. This pandemic-era economic relief included: \$528 million from the Payroll Support Program, designed to support the payrolls of aviation workers; \$7.9 million in Economic Injury Disaster Loans, meant to help small businesses recover from the pandemic; and at least \$107 million in Paycheck Protection Program (PPP) funds to help keep workers employed. The watchdog group reported that at least 49 private jet companies received funds from all three federal programs.<sup>61</sup> While keeping workers employed is a priority, it is important to remember that this is an industry dominated by the ultra wealthy customers and that many of these loans were later forgiven. Furthermore, private jet companies did not necessarily use the money to the direct benefit of their workers. Clay Lacy Aviation (CLA), a private jet company in Los Angeles that was founded at the Van Nuys Airport, shared its PPP funds with its clients, that is, with the individuals and entities who own private jets. According to NBC News, the company sent a letter to its clients stating that “CLA is prospectively offering aircraft owners a credit for a portion of full-time payroll and employee benefit costs paid through CLA to their respective flight, cabin and maintenance crew members during the covered period.”<sup>62</sup> The distribution of PPP funds to wealthy private jet owners was not the intention of the program.

### *The Industry’s Workers*

Unlike commercial airline workers, who are often unionized, private jet workers rarely belong to unions, save for the manufacturing workers who build such jets or the ground crews who work on them at airports.<sup>63</sup> Flight attendants and pilots with commercial airlines (with the notable exception

of Delta) are almost always covered by a collective bargaining agreement, and their labor issues are governed by the Railway Labor Act of 1926, which pertains to workers in both the rail and airline industries.

As private pilots and flight attendants are siloed between dozens of different private jet companies, the ability to organize is more difficult. Indeed, in 2015, pilots at Flexjet voted to unionize and join the International Brotherhood of Teamsters. On more than one occasion, Flexjet was cited for violating federal labor law by not bargaining in good faith.<sup>64</sup> By May 2018, Flexjet succeeded in an anti-union campaign that encouraged pilots to decertify Teamsters Local 1108.<sup>65</sup> Pilots at the other behemoth company, NetJets, are unionized with their “independent labor advocate,” the NetJets Association of Shared Aircraft Pilots.

### ***Heir Pollution: Dynastic Wealth and Private Jets***

In 1957, the year that Fortune published its first list of the wealthiest people in the US, it placed Paul Mellon — son of banking magnate Andrew Mellon — high at the top, as one of the eight richest Americans. The magazine estimated that Mellon had a total net worth between \$400 and \$700 million dollars (between roughly \$4.26 billion and \$7.45 billion in 2023 dollars). That same year, Mellon completed the construction of a private airstrip at his home in Northern Virginia for his and his wife’s private jet (the airstrip was also likely to have later been planned for use by the federal government to spirit away national leadership to a nearby bunker in event of catastrophe).<sup>66</sup>

Today, more than one out of four extremely wealthy private jet owners around the world — 26 percent as of 2021 — inherited their wealth entirely or in part.<sup>67</sup> As a result of this “heir pollution,” private jets abound among the dynastically wealthy. It is not surprising that the Mellon family and other family dynasties still rely on private jets for their travel. Paul Mellon’s son, the far-right campaign backer Timothy Mellon, is known to fly a Cessna Citation.

## RECOMMENDATIONS

Private jets' privileged perks should not be allowed to fly. The United States under the Biden administration has committed to tackle the climate crisis with the goal of net-zero emissions by 2050.<sup>68</sup> Considering the disproportionate emissions that private jets produce, it would be folly to ignore private aviation as a significant driver of the climate crisis. The US needs to pass policies that disincentivize the use of private jets.

This issue also concerns inequality. It is important that Congress level the playing field between the wealthy who use private jets and the passengers who must use commercial aviation, requiring that private jet owners pay their fair share for airspace and airport services. Lawmakers should consider a number of reforms to fix this broken system.

### *1. Implement a Transfer Tax on All Private Jets*



We recommend a 10 percent sales tax on all preowned private aircraft and a 5 percent tax on new aircraft transactions. According to Global Jet Capital, the total dollar volume of preowned and new private jets in 2022 was \$19.1 billion and \$15 billion, respectively. This is a total of \$34.1 billion. Our recommended transfer tax proposal would yield approximately \$2.6 billion in revenue for 2022. Elon Musk's tax obligation would be \$3.9 million if this fee was applied to his new \$78 million jet purchase.

### *2. Levy a Private Jet Fuel Tax*

The European Union is seeking to meet more than half of its climate goals within the next seven years by finally levying a tax on jet fuels on all intra-EU air travel. The "Fit for 55 Plan" will nearly double the cost of jet fuel and it is currently being discussed by EU member states.<sup>69</sup> The United States already levies a federal excise tax on general aviation fuels, but an additional duty on private jet fuel consumption can raise funds that can go towards a sustainability fund, reduce



unnecessary flights, or encourage the high flyers to consider alternative forms of transportation. Doubling the federal jet fuel tax from \$0.219 per gallon to \$0.438 per gallon for the high flyers would be a good place to start. It is a tax that only applies to those who sit at the very top of the wealth distribution.<sup>70</sup> Musk's private aircraft consumed 837,934 liters of jet fuel, that is, approximately 221,358 gallons. Our recommended rate would raise about \$96,954.80 from his private jet activity last year.

### ***3. Institute a "Short Hop" Surcharge***

The purpose of a short hop tax is to disincentivize private jet owners from taking ridiculously short flights, especially when other transportation options are available. Belgium has begun to lead the way by instituting a €10 duty per passenger on all flights shorter than 310 miles.<sup>71</sup> We recommend instituting a "short hop" surcharge on any private jet operation where the distance between the two destinations is less than 210 miles. This is approximately the distance between New York City's JFK airport to Washington D.C.'s DCA airport. Any private flight shorter than 210 miles will be subject to a duty and a higher tax rate should be applied to all private flights where the destination is shorter than 100 miles away. Our definition of a "short hop" flight is consistent with the standard established by Belgium where their tax regime will apply to very short-haul flights.

### ***4. Resist Efforts to Increase Passenger Facility Charges until Private Jet Owners Pay Their Fair Share***

If additional funds are required to upgrade our nation's airports, additional revenue should come first from the private jet industry, not from increasing costs on ticket prices for ordinary commercial jet flying consumers.

### ***5. Create a Sustainable Transportation Equity Trust Fund***

The creation of a fund that captures the revenue raised from increased taxes and fees on private jet travel is absolutely necessary. The fund can then direct resources towards sustainable transportation equity projects that would increase light rail, city-to-city rail, cycle tracks and bike lanes, and other non-emission burning transportation infrastructure.

## ***6. Increase TSA Security Oversight of Private Jets***

Eliminate the “self-regulating” features of private jet security with greater TSA oversight of private jet security.

## ***7. Pass the Aircraft Ownership Transparency Act***

The public and law enforcement have a legitimate interest in knowing who are the beneficial owners of private jets. The FAA should have a more complete picture of who owns private aircraft prior to approving a certificate of registration in the United States. As public scrutiny increases and tax legislation on private aircraft begins to be considered in Congress, the jet-owning oligarchy will seek to obscure and complicate their structures of ownership. The elimination of ownership by anonymous trusts and other entities needs to be a top priority.

## METHODOLOGY

All wealth calculations and data are from Wealth-X. The median wealth of jet owners and the number of individuals who have net worths of at least \$100 million are based off of 2021 data. According to Altrata's report published in November 2022, *World Ultra Wealth Report 2022*, there are now more than 83,000 people with \$100 million or more in wealth. However, Altrata updated its wealth model in 2022 and calculations for the median net worth of jet owners used the previous model. The Institute for Policy Studies used Altrata's 2021 wealth data for consistency.

The literature differentiates between “private” and “business” jets since the former is used for leisure and the latter is utilized for conducting business. However, some sources admit that they employ the term “business” as all-encompassing because it avoids the negative connotations associated with “private.” As such, the terms “private” and “business” in reference to jets are used interchangeably in this report. Jets, aircraft, and aviation are also used interchangeably. The Federal Aviation Administration's definition of “business aviation” is quite broad and includes helicopters and turboprop planes and any non-military general aviation flight. This helps explain the discrepancy of flight statistics between the FAA and private research firms. In the interest of consistency, we used FAA data to calculate the growing share of air traffic by business aviation.

The sales data provided by Global Jet Capital for 2022 is preliminary. More transactions will be reported throughout the year and it will yield a higher total dollar amount than what is publicized in their quarterly market brief.

Emission data in the table *Private Aviation and Its Alternatives* are estimates based on various emissions calculators. Each of these calculators uses different methodologies and thus table data should be considered estimates only.

Private jet emissions were calculated via Paramount Business Jets's carbon offset calculator. The jet used in the estimate was the Cessna Citation Excel, the most popular jet to own, according to the FAA.

Train and bus emissions were calculated using Carbon Footprint's public transportation calculator.

Commercial airline emissions were calculated using the International Civil Aviation Organization's carbon emissions calculator.

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<sup>46</sup> “NTSB investigating close call between JetBlue plane Learjet at Boston's Logan Airport.” *WCVB5*, March 1, 2023. Accessed March 17, 2023: <https://www.wcvb.com/article/faa-investigating-jetblue-learjet-near-collision-boston-logan-airport/43144585>

<sup>47</sup> Tony Romm, “Biden administration warns of ‘damaging’ effects from GOP budget plans,” *The Washington Post*, March 29, 2023. Accessed April 3, 2023: <https://www.washingtonpost.com/business/2023/03/29/gop-budget-cuts-democrats/>

<sup>48</sup> Nemaocolin, “Getting Here.” <https://www.nemaocolin.com/getting-here/>

<sup>49</sup> Federal Aviation Administration, “General Aviation and Part 135 Activity Surveys - CY 2021,” Chapters 1 and 5. [https://www.faa.gov/data\\_research/aviation\\_data\\_statistics/general\\_aviation/cy2021](https://www.faa.gov/data_research/aviation_data_statistics/general_aviation/cy2021) As of 2021, 126,735 of the more than 200,000 general aviation aircraft registered in the US were single engine pistons. These light aircraft flew 12.8 million hours in total in 2021, compared to 4.9 million jet hours. All pistons (single engine and twin engine) used approximately 200 million gallons of aviation gasoline (avgas) in 2021; all jets used approximately 1.6 billion gallons of jet fuel.

<sup>50</sup> Crina Boros and Juliet Ferguson, “Private jets - the Achilles heel of EU air traffic security?” *EUobserver*, July 27, 2018. Accessed March 10, 2023: <https://euobserver.com/rule-of-law/142472>

<sup>51</sup> Kelly Carr and Jaimi Dowdell, “Secrets in the Sky,” *The Boston Globe*, 2018. <https://bostonglobe.com/spotlight/secrets-in-the-sky/series/part-one/>

<sup>52</sup> US Government Accountability Office, “Aviation: FAA Needs to Better Prevent, Detect, and Respond to Fraud and Abuse Risks in Aircraft Registration,” GAO-20-164, March 25, 2020. <https://www.gao.gov/products/gao-20-164>

<sup>53</sup> US Government Accountability Office, “Aviation: FAA Needs to Better Prevent, Detect, and Respond.”

<sup>54</sup> US Government Accountability Office, “Aviation: FAA Needs to Better Prevent, Detect, and Respond.”

<sup>55</sup> Frank Newport, “US Public Opinion and the 2017 Tax Law,” Gallup, April 29, 2019. <https://news.gallup.com/opinion/polling-matters/249161/public-opinion-2017-tax-law.aspx>

<sup>56</sup> OpenSecrets. <https://www.opensecrets.org/federal-lobbying/>

<sup>57</sup> The IRS’s modified accelerated cost recovery system (MACRS), the US tax depreciation system, sets a five-year depreciation schedule for private aircraft used for business purposes.

<sup>58</sup> Obama said, “Are Republicans in Congress really willing to let these cuts fall on our kids’ schools and mental healthcare just to protect tax loopholes for corporate jet owners?” See more: Andy Sullivan, “Insight: In heartland, Obama's move against jet loophole hits turbulence,” *Reuters*, March 20, 2013. <https://www.reuters.com/article/cnews-us-usa-fiscal-jets-insight-idCABRE92J05720130320>



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- <sup>60</sup> Paul Lowe, “GA Faults Report on Private Jet Travel,” AINonline, July 30, 2008. *Internet Archive*. <https://web.archive.org/web/20140907113735/http://www.ainonline.com/aviation-news/aviation-international-news/2008-07-30/ga-faults-report-private-jet-travel>
- <sup>61</sup> Accountable.US, “Trump Administration Let Private Jet Industry Triple-Dip in Pandemic Aid Despite Sky-high Demand,” January 2021. <https://www.accountable.us/wp-content/uploads/2021/01/2021-01-Accountable.US-Private-Jet-Triple-Dippers.pdf>
- <sup>62</sup> Stephanie Ruhle, Jonathan Allen, and Michael Cappetta, “How private jet owners got a subsidy from coronavirus relief funds,” NBC News, May 28, 2020. <https://www.nbcnews.com/politics/politics-news/how-private-jet-owners-got-subsidy-coronavirus-relief-funds-n1217061>
- <sup>63</sup> Manufacturing workers, if unionized, would likely belong to the International Association of Machinists and Aerospace Workers (IAM), part of the AFL-CIO. Ground crew workers such as mechanics may be unionized through the Transport Workers Union of America, also part of the AFL-CIO.
- <sup>64</sup> Larry Swisher, “Private Jet Service Must Bargain With Pilots’ Union on New Contract,” Bloomberg Law, January 30, 2017. <https://news.bloomberglaw.com/daily-labor-report/private-jet-service-must-bargain-with-pilots-union-on-new-contract>
- <sup>65</sup> International Brotherhood of Teamsters, “FlexJet Takes Its Anti-Union Campaign to a New Low,” May 16, 2018. <https://teamster.org/2018/05/flexjet-takes-its-anti-union-campaign-new-low/>; Josh Eidelson, “Flexjet Pilots Oust Teamsters in Huge Defeat for American Unions,” Bloomberg, May 31, 2018. <https://www.bloomberg.com/news/articles/2018-05-31/flexjet-pilots-reject-teamsters-in-big-defeat-for-labor-stronghold#xj4y7vzkg>
- <sup>66</sup> Garrett M. Graff, “The President’s Secret Air Force,” Politico, May 2, 2017. <https://www.politico.com/magazine/story/2017/05/02/the-presidents-secret-air-force-215091/>
- <sup>67</sup> Wealth-X, “Spotlight on Private Jet Owners,” August 2021. [https://thehometruster.com/wp-content/uploads/2022/03/Wealth\\_X\\_Spotlight\\_on\\_Private\\_Jet\\_Owners\\_2021.pdf](https://thehometruster.com/wp-content/uploads/2022/03/Wealth_X_Spotlight_on_Private_Jet_Owners_2021.pdf)
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- <sup>69</sup> “Fit for 55’: delivering the EU’s 2030 Climate Target on the way to climate neutrality,” *European Commission*, July 14, 2021. Accessed March 21, 2023: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0550>
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