Private Jet Use by Celebrities Causes Climate Crisis to Soar to New Heights

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I. INTRODUCTION

Nearly fifty percent of the global population uses airlines.[2] However, one percent of the global population is responsible for half of the total emissions associated with flying.[3] This incredibly small population is primarily made up of wealthy celebrities.[4] In November of 2019, Kylie Jenner, at the age of twenty-one, became the youngest self-made billionaire ever.[5] Shortly thereafter, Jenner purchased a custom-designed private jet, which features a pink interior and exterior, plush leather seats with her initials embroidered on the headrest, and a TV area, for more than seventy-million dollars.[6] One of her many trips on this jet occurred in July of 2022, when Jenner boarded a flight that lasted only seventeen minutes.[7] It is estimated that this short flight resulted in one ton of carbon dioxide emissions, which is about a quarter of the total annual carbon footprint of the average person globally.[8]

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[2] FEDERAL AVIATION ADMINISTRATION, *Aviation Emissions, Impacts & Mitigation: A Primer*, at p. 1, (Jan 2015), https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/media/primer_jan2015.pdf.
[3] Oliver Milman, *A 17-minute flight? The super-rich who have 'absolute disregard for the planet'*, THE GUARDIAN (July 21, 2022, 5:00 PM), https://www.theguardian.com/environment/2022/jul/21/kylie-jenner-short-private-jet-flights-super-rich-climate-crisis.
[4] *Id.*
[5] Natalie Robehmed, *At 21, Kylie Jenner Becomes The Youngest Self-Made Billionaire Ever*, FORBES (Mar. 5, 2019, 5:00 AM), https://www.forbes.com/sites/natalierobehmed/2019/03/05/at-21-kylie-jenner-becomes-the-youngest-self-made-billionaire-ever/?sh=71351c802794.
[6] Jennifer Hassan, *Kylie Jenner Gets Roasted for Flauting Private Jet in Climate Crisis*, THE WASHINGTON POST (July 21, 2022, 10:30 AM), https://www.washingtonpost.com/lifestyle/2022/07/21/kylie-jenner-private-jet-climate-crisis/.
[7] Milman, *supra* note 3.
[8] *Id.*

Jenner's trips on her aircraft, however, could largely be accomplished using other methods of transportation and significantly less emissions. The seventeen-minute flight taken by Jenner in July of 2022 would have taken just forty minutes in a car and significantly reduced the total emissions released into the environment.[9] Despite growing concerns over the climate crisis, Jenner continues to frivolously travel on her private jet. She has even taken to Instagram to make light of her private-jet trips in a post captioned "you wanna take mine or yours?" with a photo of herself and her partner, Travis Scott, standing between their private jets.[10] While this post seems to innocently highlight the status, luxury, and wealth Jenner has, it actually emphasizes the lack of regard she has towards the environment and the devastating effect her actions have on it. Jenner is just one of many celebrities who routinely engage in this environmentally harmful method of transportation. Although Jenner's use of private jets may be expected given her very public and lavish lifestyle, some of the other biggest celebrity perpetrators may come as a surprise.

Halfway through 2022, The Tab released a top-ten list.[11] Normally, celebrities thrive to make their way to the top of such a list; but not this one. This top ten list ranks the celebrities who have racked up the most carbon dioxide emissions during the year using their private jets.[12] Despite the enormous carbon footprint Kylie

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[9] *Id.*
[10] *Id.*
[11] Phoebe Kowhai, *The celebs who have racked up the most CO2 emissions this year using their private jets*, THE TAB (July 25, 2022), https://thetab.com/uk/2022/07/25/celebrity-private-jets-carbon-emissions-climate-change-263281.
[12] *Id.*

Jenner has left on the planet by taking flights, as discussed above, she is not even on this list.[13]

The list does include, however, Oprah Winfrey, Kim Kardashian, Blake Shelton, Aaron Rodriguez, and Floyd Mayweather, to name a few.[14] The celebrity at the top of this list is familiar with being number one on many charts, especially with the recent release of an album and sell-out stadium tour. It is Taylor Swift.[15] Between January 2022 and August 2022, Swift's private jet has taken flight one hundred and seventy times, with an average distanced traveled of one hundred and thirty-nine miles in eighty minutes.[16] At a speed of sixty miles per hour, it would take roughly two hours and twenty minutes to travel this same distance.[17] The carbon dioxide emissions for these flights totaled 8,293 tons.[18] The emissions from Swift's private jet are about the same as what 2,073 people globally would emit in one year, on average.[19] As Jenner did, Swift saw backlash from this irresponsible detriment to the planet. A spokesperson for Swift responded to this negative press by explaining that Swift's jet is routinely loaned to other individuals and "to attribute most or all of these

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[13] *Id.*
[14] *Id.*
[15] *Id.*
[16] *Id.*
[17] *Miles and Mph to Time Calculator*, RESEARCH MANIACS, https://researchmaniacs.com/Calculator/miles-mph-to-time/60/how-long-does-it-take-to-drive-139-miles-at-60-mph.html.
[18] Kowhai, *supra* note 11.
[19] *Calculate Your Carbon Footprint*, THE NATURE CONSERVANCY, https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/#:~:text=Globally%2C%20the%20average%20carbon%20footprint%20is%20closer%20to%204%20tons.

trips to her is blatantly incorrect."[20] This response is just one excuse private jet owners may offer to defer responsibility for the negative impacts their jets cause.

Private jet use by celebrities has caused the climate crisis to soar to new heights. At this moment, the private aviation industry faces very little regulation regarding its environmental impact on the planet. This is where change is needed. This Article outlines the development of the aviation industry, the negative environmental impact it has caused, the historic, current, and forward-looking legislation governing the industry, as well as the environmental impact this legislation has on the planet. Specifically, this Article aims to expose a sector of the aviation industry whose regulation is currently lacking but should be prioritized moving forward because of its disproportionate negative environmental impact. This Article lastly examines several potential solutions, as well as their flaws, to combat celebrity private jet usage and its devastating effect on the environment.

II. BACKGROUND

A. The Rise of Aviation

The earliest aircrafts and flights more closely resembled a modern-day private flight, rather than a commercial flight, given the size of the aircraft and number of passengers.[21] The first ever successful flight in history took off on December 17, 1903.[22] The duration of the flight was twelve seconds, and the aircraft carried only

[20] Kowhai, *supra* note 11.
[21] *History of Private Aviation*, SOLAIRUS AVIATION (July 13, 2016), https://www.solairus.aero/history-private-aviation/.
[22] *First Airplane Flies*, HISTORY (Dec. 15, 2021), https://www.history.com/this-day-in-history/first-airplane-flies#:~:text=Near%20Kitty%20Hawk%2C%20North%20Carolina,feet%20on%20its%20inaugural%20flight.

two passengers.[23] During the 1920s, the aviation industry saw growth in function and style, as more passengers were able to board the planes and passengers were served drinks and entertained with in-flight movies.[24] In 1945, passengers boarded the Pan Am Boeing 307 aircraft for the first time.[25] This aircraft model propelled commercial aviation forwards, as it was the first to implement a pressurized cabin and fly above 20,000 feet.[26] These features allowed passengers to fly much more comfortably, as turbulence, excessive noise, and air pressure were significantly reduced.[27] In the 1950s, "for the first time in history, more US passengers were travelling by air than train."[28] This is largely due to the Boeing 707 airliner, which was larger and more economical than its predecessor.[29] This aircraft model began regular service in 1958 and remained in operation until the end of 2018.[30] "The 1950s also ushered in the 'jet age'."[31] In the 1950s, the first business jet in the industry was released, which accommodated ten passengers and two crewmembers.[32] It was not until 1966 that private jets with large cabins began to be manufactured.[33] Since then, commercial and private aircrafts have seen rapid growth and development to achieve the modern-

[23] *Id.*
[24] *How Air Travel has Changed in Every Decade from the 1920s to Today*, LOVE EXPLORING (Sept. 02, 2021) https://www.loveexploring.com/gallerylist/86315/how-air-travel-has-changed-in-every-decade-from-the-1920s-to-today.
[25] *Id.*
[26] *Id.*
[27] *Id.*
[28] *Id.*
[29] *Id.*
[30] LOVE EXPLORING, *supra* note 24.
[31] *Id.*
[32] *History of Private Aviation*, *supra* note 21.
[33] *Id.*

day models. These models, which are more attractive to flyers than ever before, have not only increased demand, but also the carbon footprint left on the planet.

B. The Sky-High Price of Traveling on a Private Jet

There are steep costs associated with flying via private jet, including the cost of the plane itself, fuel, staff, and routine maintenance.[34] There are a variety of ways for a person to finance travel on a private jet. The first and most expensive way to travel on a private jet is the outright purchase of one.[35] The cost of a new jet will generally range between two and one-hundred million dollars.[36] Some companies that sell private jets explain that if a person spends at least two-hundred hours per year flying, the purchase of a jet would be justified.[37] Others, however, put this estimate closer to the four-hundred to six-hundred hour range.[38]

If a person does not fly this much or have the financial means to outright purchase a plane, an alternative method of private traveling may be better suited for their travel needs. Alternatives include partial ownership, private charter services, or membership in a private jet club.[39] Partial, or fractional, jet ownership is functionally similar to a timeshare in real estate.[40] Partial owners usually pay for a fixed number of hours a year upfront.[41] The most popular cost option for partial

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[34] Flying Staff, *How Much Does a Private Jet Cost?,* FLYING (June 8, 2022), https://www.flyingmag.com/guides/how-much-is-a-private-jet/.
[35] *Flying Private: The Cost and Benefit of Luxury Travel*, FINANCIAL SAMURAI (April 22, 2022), https://www.financialsamurai.com/flying-private-the-cost-and-benefits-of-luxury-travel/.
[36] Samantha Silberstein & Kimberly Overcast, *How Much is a Private Jet?,* INVESTOPEDIA (Mar. 06, 2022), https://www.investopedia.com/articles/investing/081015/can-i-afford-private-jet.asp.
[37] *Id.*
[38] *Id.*
[39] *Id.*
[40] *Id.*
[41] Flying Private: The Cost and Benefit of Luxury Travel, *supra* note 35.

ownership is fifty hours a year in flight time.[42] As such, partial ownership starts at roughly three-hundred thousand dollars and can easily span up to one million dollars per year.[43] Another alternative method of flying private is through charter services, which allows a passenger to rent a private jet and only pay for the time it is used, similar to a car rental service.[44] Chartering a private plane can cost anywhere between four-thousand and twenty-thousand dollars per hour, depending on the size of the jet.[45] Lastly, by becoming a member of a private jet club, travelers can purchase annual membership from a charter company that, in turn, makes jets available for use.[46] An annual membership costs, at a minimum, about three-thousand dollars, or over three-hundred dollars a month.[47]

In addition to the cost of the plane, charges for jet fuel are also passed onto the flyer.[48] The cost of fuel depends largely on factors such as the size of the jet, weight, weather conditions, altitude, and speed.[49] Private jets will burn anywhere from fifty to over six-hundred gallons of fuel per hour.[50] At an average price of $5.29 per gallon, jet fuel costs can vary anywhere between five hundred to two-thousand dollars per hour.[51] Given the sky-high costs associated with flying private, it is an activity largely

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[42] *Id.*
[43] *Id.*
[44] Tim Parker & Margaret James, *The Economics of Private Jet Charters*, INVESTOPEDIA, (Mar. 4, 2021), https://www.investopedia.com/articles/personal-finance/063015/economics-private-jet-charters.asp.
[45] *Id.*
[46] Silberstein & Overcast, *supra* note 36.
[47] Parker & James, *supra* note 44.
[48] *Id.*
[49] *How Much Fuel Do Private Jets Burn Per Hour?*, COMPARE PRIVATE PLANES, (last viewed Apr. 10, 2023) https://compareprivateplanes.com/articles/private-jet-fuel-burn-per-hour.
[50] *Id.*
[51] *How Much Does Jet Fuel Cost? (Per Gallon, Liter, Mile),* EXECUTIVE FLYERS, (Oct. 5, 2022), https://executiveflyers.com/how-much-does-jet-fuel-cost/.

reserved for the wealthiest people. Due to their wealth and disproportionate impact on the environment, this demographic is a target to impose additional taxes and fees upon.

C. The Environmental Impact of the Aviation Industry

The development of aviation has largely increased society's quality of life and its continued development is necessary to meet the needs of a growing economy and expanding population.[52] However, environmental stability and public health are jeopardized as a result of the continuing development of the aviation industry.[53] When describing the potential health concerns of U.S. citizens and the degradation of the global climate as a result of aviation, the Federal Aviation Agency explains that "Aviation affects the environment in many ways: people living near airports are exposed to noise from aircraft; streams, rivers, and wetlands may be impacted by to pollutants discharged in storm water runoff from airports; and aircraft engines emit pollutants into the atmosphere.[54] Thus, the environmental impacts of emissions associated with commercial aviation impact the general health and welfare of the public, air quality degradation, and broader climate change.[55]

Aircraft engines, like cars, trucks, and other methods of transportation, produce greenhouse gases, including carbon dioxide (CO2).[56] As explained by the Federal Aviation Agency, "carbon dioxide is the product of complete combustion of

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[52] FEDERAL AVIATION ADMINISTRATION, AVIATION EMISSIONS, IMPACTS & MITIGATION: A PRIMER, at p. 1, (Jan 2015), https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/media/primer_jan2015.pdf.
[53] *Id.*
[54] *Id.*
[55] *Id.*
[56] *Id.* at 2.

hydrocarbon fuels like gasoline, jet fuel, and diesel. Carbon in fuel combines with oxygen in the air to produce CO2, which negatively impacts climate change."[57] CO2 emissions are expected to warm the lower atmosphere and Earth's surface.[58] Additionally, CO2 emissions can change sea levels, ice and snow coverage, and precipitation.[59] These potential climate changes impact agriculture and forestry, the ecosystem, energy production and consumption, human health, and social welfare.[60]

CO2 emissions by different modes of transportation are best measured on a per passenger per mile basis across the various transportation types.[61] When compared to other methods of transportation, aviation is approaching the most energy efficient transportation mode because of the large number of passengers carried at once.[62] However, private jets generally carry few passengers for shorter distances, making them five to fourteen times more polluting than commercial planes, per passenger.[63] A celebrity using a private plane emits roughly 480 times more CO2 than an average person's annual emissions.[64] A large majority of fuel burned, and thus emissions released, occur from taxiing the plane, warming the engine, and takeoff, compared to

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[57] *Id.* at 3.
[58] UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, AIRCRAFT CONTRAILS FACTSHEET, at p. 3 (Sept. 2000).
[59] Guy P. Brasseur, *A Report on the Way Forward Based on the Review of Research Gaps and Priorities*, AVIATION CLIMATE CHANGE RESEARCH INITIATIVE, at p. 36 (Aug. 12, 2008), https://www.faa.gov/sites/faa.gov/files/about/office_org/headquarters_offices/apl/ACCRI_Report_final.pdf.
[60] AVIATION EMISSIONS, IMPACTS & MITIGATION: A PRIMER, *supra* note 52, at p. 16.
[61] *Id.* at 5.
[62] *Id.* at 5.
[63] Milman, *supra* note 3.
[64] Allyson Chiu, *Celebrities Use Private Jets Excessively. It's a Climate Nightmare.*, THE WASHINGTON POST (Aug. 2, 2022, 8:22 PM), https://www.washingtonpost.com/climate-environment/2022/08/02/taylor-swift-kylie-jenner-private-jet-emissions/.

when the plane is covering distance while cruising.[65] Accordingly, a short distance private jet trip emphasizes "the least efficient parts of the plane's duty cycle."[66] This exemplifies a significant opportunity for the government and industry to take action to prevent the substantial and disproportionate detrimental emissions that result from private flights. Doing so can be an effective step towards lessening the carbon footprint celebrities leave on the environment.[67]

III. GOVERNMENTAL ACTION

A. History of Regulation on the Aviation Industry and its Impact on the Climate Crisis

Climate change has been a heavily debated topic throughout history.[68] The primary source of legislation regulating climate change comes from Congress, federal agencies, and the President.[69] Historically, however, legislation has either been arguably lacking or ineffective. In 1969, President Nixon's advisor warned the public of "the carbon dioxide problem" that would "dangerously heat the planet, melt the glaciers, and cause the seas to rise."[70] Over fifty years later, drastic steps are finally being taken to respond to and resolve the climate crisis.[71] The following sections will introduce the agencies and legislation that are responsible for the historic and current efforts towards combating the climate crisis, including the Clean Air Act (the "CAA")

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[65] *Id.*
[66] *Id.*
[67] *Id.*
[68] *Congress Climate History*, CENTER FOR CLIMATE AND ENERGY SOLUTIONS (last visited Mar. 20, 2023), https://www.c2es.org/content/congress-climate-history/.
[69] *Id.*
[70] Coral Davenport & Lisa Friedman, *Five Decades in the Making: Why It Took Congress So Long to Act on Climate*, THE NEW YORK TIMES (Aug. 7, 2022) https://www.nytimes.com/2022/08/07/climate/senate-climate-law.html.
[71] *Id.*

and the Environmental Protection Agency ("EPA"), which forged the first ever aviation emission rules and the 2021 United States Aviation Climate Action Plan that seeks to eliminate aviation emissions by 2050.[72]

i. The Clean Air Act and the Environmental Protection Agency

In its introduction to "The Plain English Guide to the Clean Air Act," the EPA recalls a particularly alarming instance of sudden and deadly air pollution: "In October 1948, a thick cloud of air pollution formed above the industrial town of Donora, Pennsylvania. The cloud which lingered for five days, killed 20 people and caused sickness in 6,000 of the town's 14,000 people."[73] Events like this prompted a move towards public health legislation, in the form of air pollution control.[74] One of the first pieces of proposed legislation to combat air pollution was the Clean Air Act of 1963 ("CAA").[75] After more than twenty years of revisions to the breadth and scope of the Act, Congress finally enacted the CAA in 1990.[76] The CAA aimed to protect public health and welfare from any actual or potential adverse effects from air pollution or from exposures to pollutants which originate as emissions to the ambient air.[77] The CAA sought to achieve this mission by reducing air pollutants, including emissions of toxic pollutants, that are produced from stationary sources and mobile sources, including cars, trucks, and planes.[78] The CAA further encouraged the

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[72] *Id.*
[73] *Id.*
[74] *Id.*
[75] Congress Climate history, *supra* note 68.; UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, CLEAN AIR ACT OVERVIEW, at pg 4. (May 4, 2022).
[76] UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, CLEAN AIR ACT OVERVIEW, at p. 4 (May 4, 2022).
[77] Congressional Declaration of Purpose. 42 U.S.C. § 7470 (1955).
[78] CLEAN AIR ACT OVERVIEW, *supra* note 75, at p. 4.

production and use of cleaner transportation methods and alternative fuels to reduce carbon dioxide emissions.[79] To achieve these goals, the CAA granted authority to the EPA to set limits on certain air pollutants, including limitations on the maximum amount of carbon dioxide emissions that can be in the air at a given time throughout the United States.[80]

Although the CAA provided the first authority to control emissions, it has been challenged regarding its ability to regulate greenhouse gas emissions.[81] In 2003, the EPA received petitions from several states, local governments, and environmental organizations to regulate the greenhouse gases from cars and trucks.[82] Initially, the EPA claimed that it did not have the authority under the CAA to do so.[83] The issue was brought to the attention of the U.S. Supreme Court, which held that greenhouse gases were air pollutants within the Clean Air Act's definition, requiring the EPA to regulate them if it found that they caused, or contributed to, air pollution which "may reasonably be anticipated to endanger public health or welfare."[84] Since this finding, the EPA has received various petitions from several states, local governments, and environmental organizations to regulate greenhouse gas emissions from aircraft

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[79] *Id.* at 9.
[80] UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, THE PLAIN ENGLISH GUIDE TO THE CLEAN AIR ACT, at p. 3 (April 2007).
[81] James E. MCarthy, *Aviation and Climate Change*, CONGRESSIONAL RESEARCH SERVICE, at p. 4 (January 27, 2010), https://sgp.fas.org/crs/misc/R40090.pdf.
[82] *Id.*
[83] *Id.*
[84] Massachusetts v. Env't Prot. Agency, 549 U.S. 497, 529–30 (2007) (quoting the 2007 version of 42 U.S.C. § 7521 (West 2022)). Similar, but not identical, language regarding is from Section 202(a) of the Clean Air Act, which requires emission standards for motor vehicles. Similar, but not identical, language regarding endangerment appears as the prerequisite to the setting of emission standards for other categories of sources elsewhere in the Clean Air Act. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *supra* note 58.

engines.[85] However, the EPA made clear that it would prefer Congress to enact legislation explicitly targeted at greenhouse gas emissions in the aviation industry, as opposed to the EPA acting using its current authority under the CAA, because the legislation would likely be more effective and avoid legal challenges in the courts.[86] Accordingly, the EPA did not make significant moves to regulate greenhouse gas emissions from aviation under the CAA for years.[87]

ii. The First-Ever Airplane Emission Rules

It was not until 2016 that the EPA, using its authority under the CAA, legally declared that greenhouse gases, including CO2, emitted from certain classes of engines used in aircrafts "endanger the public health and welfare of the current and future generations."[88] At that point, aircrafts remained the single largest greenhouse gas emitting transportation source not yet subject to greenhouse gas standards in the United States.[89] For the next few years, the EPA promulgated standards addressing greenhouse gas emissions from engines on covered aircrafts.[90] In 2020, the EPA finalized and introduced the first-ever airplane emissions rules regulating green-

[85] *Aviation and Climate Change*, CONGRESSIONAL RESEARCH SERVICE, at p. 5 (Aug. 4, 2009), https://www.everycrsreport.com/files/20090804_R40090_cdf18713d784bceecd73e4fd917d13fd37372353.pdf.
[86] *Id.*
[87] Nathan Richardson, *Aviation, Carbon, and the Clean Air Act,* at p. 9 (July 2012) https://media.rff.org/documents/RFF-DP-12-22.pdf.
[88] *EPA Finalizes Airplane Greenhouse Gas Emission Standards*, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, at p. 2 (Dec. 2020), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010TFZ.pdf.
[89] *Id.*
[90] *Control of Air Pollution from Airplanes and Airplane Engines: GHG Emission Standards and Test Procedures - Final Rulemaking*, ENVIRONMENTAL PROTECTION AGENCY (Jan. 13, 2022) https://www.epa.gov/regulations-emissions-vehicles-and-engines/control-air-pollution-airplanes-and-airplane-engines-ghg.

house gas emissions from select commercial aircraft.[91] The rules require that aircraft manufacturers use fuel-efficient engines that release less carbon dioxide for aircrafts produced on or after January 1, 2028.[92] This includes large business jets and commercial aircrafts.[93] When speaking about this rule, a spokesperson for Boeing, one of the world's largest commercial aircraft manufacturers, said the rule would be a "major step forward for protecting the environment and supporting sustainable growth of commercial aviation and the United States economy."[94] However, many environmentalists were not convinced that this rule would substantially impact the fight against the climate crisis and urged the incoming administration, under President Biden, to implement more stringent regulation to reduce overall aviation emissions.[95]

iii. The 2021 United States Aviation Climate Action Plan

In 2021, the Biden-Harris Administration and the Federal Aviation Administration launched the first-ever comprehensive aviation climate action plan.[96] The first line of the 2021 Aviation Climate Action Plan (the "Plan") states that "[t]he United States believes that addressing the climate crisis through enhanced ambition

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[91] Reese Oxner, *U.S. Implementing 1st-Ever Airplane Emission Rules; Critics Say They're Ineffective*, NATIONAL PUBLIC RADIO (Dec. 28, 2020, 4:23 PM), https://www.npr.org/2020/12/28/950863508/u-s-implementing-1st-ever-airplane-emission-rules-critics-say-theyre-ineffective.
[92] UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, EPA FINALIZES AIRPLANE GREENHOUSE GAS EMISSION STANDARDS, at p. 1 (Dec. 2020), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010TFZ.pdf.
[93] *Id.*
[94] *Id.*
[95] *Id.*
[96] *U.S. Releases First-Ever Comprehensive Aviation Climate Action Plan to Achieve Net-Zero Emissions by 2050*, U.S. DEPARTMENT OF TRANSPORTATION, https://www.transportation.gov/briefing-room/us-releases-first-ever-comprehensive-aviation-climate-action-plan-achieve-net-zero.

is a defining priority of our time."[97] The primary goal of the Plan is to achieve net-zero greenhouse gas emissions from the United States aviation sector by 2050.[98] To achieve this ambitious goal, various measures, including aircraft technology, operations, and sustainable aviation fuels, must be combined.[99] Additionally, seeing significant progress towards this goal is most crucial between now and 2030, according to the Plan.[100]

As highlighted by the Plan, historically, advances in aircraft technology have been the primary factor in mitigating the aviation industry's environmental impact.[101] While this has proven to be successful, there is a continued need for improved sustainable aviation fuel ("SAF").[102] SAF achieves a minimum of 50% reduction in greenhouse gases compared to the standard fuel used in aircrafts.[103] The White House committed to increase the production of SAF to at least three billion gallons per year by 2030.[104] It is the Plan's hope that by doing so, there will be sufficient SAF available to meet the aviation industry's demand for jet fuel in 2050, which is projected to be about thirty-five billion gallons per year.[105] Though the positive environmental impact of planes using SAF is evident, the costs associated with its research, development, and distribution will pose a challenge.[106] To overcome

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[97] FEDERAL AVIATION AGENCY, UNITED STATES 2021 AVIATION CLIMATE ACTION PLAN, at p. 1, (2020).
[98] *Id.*
[99] *Id.* at 7.
[100] *Id.* at 7.
[101] *Id* at 11.
[102] *Id.* at 11.
[103] FEDERAL AVIATION ADMINISTRATION, AVIATION CLIMATE ACTION PLAN, (Nov. 9, 2021).
[104] UNITED STATES 2021 AVIATION CLIMATE ACTION PLAN, *supra* note 97, at 8.
[105] AVIATION CLIMATE ACTION PLAN, *supra* note 103.
[106] *Id.*

this challenge, the Plan proposed a SAF tax credit to help cut costs and scale production of sustainable fuels for aviation.[107] The Plan additionally proposes new and ongoing funding opportunities to support sustainable aviation fuel projects and production totaling up to $4.3 billion.[108] The proposed tax and funding opportunities will enable the Plan to see successful implementation, and potentially encourage the EPA to take affirmative steps towards reducing aviation emissions using its power under the CAA as well.[109]

In support of the 2030 initiative, several airlines, including United Airlines, Delta Airlines, American Airlines, Southwest Airlines, Alaska Airlines, and JetBlue, have pledged their commitment to increase SAF use and advance sustainability within their operations.[110] Although this is a positive step towards combating the climate crisis by the major commercial airline companies, companies that develop or rent out small luxury aircrafts for private use have stayed silent regarding their contribution.

B. Congressional Authority to Impose Taxes on the Aviation Industry

Historically, taxes have been used as a method to regulate industries, such as the aviation industry, and raise revenues to support governmental initiatives. Congress has three broad and enumerated powers that allow it to govern, regulate,

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[107] *FACT SHEET: Biden Administration Advances the Future of Sustainable Fuels in American Aviation*, WHITE HOUSE.GOV (Dept. 9, 2021) https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/09/fact-sheet-biden-administration-advances-the-future-of-sustainable-fuels-in-american-aviation/.
[108] *Id.*
[109] *Id.*
[110] *Id.*

and tax the aviation industry: The national commerce power, the taxing and spending power, and the necessary and proper power.[111]

Under the United States Constitution, Congress was granted the national commerce power.[112] The commerce power is the power to regulate commerce, including the exchange of people and things, among the several states.[113] The phrase "among the several states" is limited to commerce that takes place between states, however, the power also "extends to those activities intrastate which so affect interstate commerce."[114] Because the purpose of the aviation industry is precisely to transport people and things, whether in one state or across state lines, it is considered commerce, and thus, Congress has the enumerated power to regulate it.

The taxing and spending power grants Congress "the power to lay and collect taxes, duties, imposes and excises, to pay the debts and provide for the common defense and general welfare of the United States."[115] Where Congress can regulate a certain activity, the tax imposed may be simply a tax or a penalty.[116] For example, Congress can regulate the sale of cigarettes through the commerce power, and therefore can impose a penalty tax on the sale of cigarettes with the intent to deter or influence consumers' buying habits.[117] In the same way, Congress can regulate the

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[111] U.S. CONST. amend. I, § 8, cl. 3.; U.S. CONST. amend. I, § 8, cl. 1.; U.S. CONST. amend. I, § 8, cl. 18.
[112] U.S. CONST. amend. I, § 8, cl. 3.
[113] *Id.*
[114] Randy E Barnett & Andrew Koppelman, *The Commerce Clause*, NATIONAL CONSTITUTION CENTER, https://constitutioncenter.org/the-constitution/articles/article-i/clauses/752.
[115] U.S. CONST. amend. I, § 8, cl. 1.
[116] Robert D. Cooter & Neil S. Siegel, *Not the Power to Destroy: An Effects Theory of the Tax Power*, 98 VA. L. REV. 1195, 1198-1199 (Oct. 2012) (discussing Congress's Taxing and Spending Powers).
[117] *Id.* at 30.

aviation industry through interstate commerce and thus may impose taxes on it. Even if Congress could not regulate a sector of the aviation industry, arguably such as intrastate flights, the taxing power still allows Congress to tax that activity, so long as the purpose and effect of the revenue raised is to achieve a regulatory end and not penalize.[118] With the revenue earned from a tax, Congress can spend it to promote the general welfare of the United States and its people.[119]

Lastly, the necessary and proper clause, allows Congress "to make all laws which shall be necessary and proper for carrying into execution … all other powers by this Constitution in the Government of the United States, or in any Department or Officer thereof.[120] This power allows Congress to make laws governing interstate commerce activities, such as the aviation industry, and enforce its taxing and spending power by enacting legislation to that end.[121] The necessary and proper power extends to governmental departments and offices, which may include the Internal Revenue Service ("IRS") or the Federal Aviation Administration ("FAA").[122] With these three enumerated Constitutional powers, the aviation industry may be governed, regulated, and taxed properly.

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[118] *Id.* at 4.
[119] *Id.* at 12.
[120] U.S. CONST. amend. I, § 8, cl. 18.
[121] John Mikhail, *The Necessary and Proper Clauses*, 102 GEO. L.J. 1045, 1084 (2014) (explaining Congress's Necessary and Proper Power).
[122] *Id.* at 2.

C. Current Taxes on Jet Fuel

The IRS may impose excise taxes on various goods, services, and activities, which include flying and the fuel used to do so.[123] There is currently an excise tax on gasoline and kerosene fuel used in both commercial and noncommercial aviation.[124] Airplanes originally used gasoline, but kerosene is now the most common type of fuel used in planes.[125] Kerosene for use in aviation is taxed at a rate of 0.244 cents per gallon, whereas the tax on gasoline for use in aviation is 0.194 cents per gallon.[126] This tax is imposed on the sale of the fuel.[127] Because a federal tax is already imposed on the sale of aviation fuel, a proposed additional tax on fuel used in private jets could be a feasible solution to fund the research, development, production, and distribution of sustainable aviation fuels.

Although the aviation industry has rapidly developed and increased in popularity, the government has failed to regulate it at the same pace. The aviation industry, as it relates to environmental concerns, has been an area the government has historically demonstrated little concern for through legislation, despite having the authority to do so. This is especially true regarding the private sector. The first-ever comprehensive plan to reduce the negative environmental effects from aviation

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[123] *Excise Tax*, INTERNAL REVENUE SERVICE, https://www.irs.gov/businesses/small-businesses-self-employed/excise-tax.
[124] *Id. (*defining commercial aviation as "any use of an aircraft in the business of transporting persons or property by air for pay" and noncommercial aviation as any use of an aircraft not described as commercial aviation).
[125] *Why Airplanes Use Kerosene Rather than Plain Gasoline for Fuel*, ONE MONROE AEROSPACE (April 29, 2019), https://monroeaerospace.com/blog/why-airplanes-use-kerosene-rather-than-plain-gasoline-for-fuel.
[126] *Publication 510, Excise Taxes (Including Fuel Tax Credits and Refunds),* INTERNAL REVENUE SERVICE (July 2021), https://www.irs.gov/publications/p510.
[127] *Id.*

was initiated in 2021. The United States Aviation Climate Action Plan aims to achieve net-zero greenhouse gas emissions from aviation by the year 2050. The solutions proposed in this article are largely intended to support the government's targets set forth in this plan, often by taxing the purchase and charter of flights and the fuel necessary to do so. However, in addition to these governmental and regulatory measures, action from those within the industry is also necessary.

IV. INDUSTRY ACTION: THE BUSINESS AVIATION COMMITMENT ON CLIMATE CHANGE

The government alone cannot undo past harm or prevent future harm to the environment from flying, particularly flying private with few individuals. In addition to governmental action, airline companies, aircraft producers, and other key players within the aviation industry must do their part to combat climate change. Many of these participants, but not all, have pledged to do so through The Business Aviation Commitment on Climate Change (the "Commitment").

People often fail to distinguish private aircrafts and business aircrafts, which causes erroneous comments and opinions by the press and politicians.[128] The private aviation industry includes the use of the aircraft for business purposes or for pleasure.[129] However, the purpose of the flight distinguishes the regulations governing it.[130] As such, the Business Aviation Commitment on Climate Change

[128] Mike McCracken, *Private Aviation Versus Business Aviation–What Is The Difference?* HAWKEYE AIRCRAFT ACQUISITIONS LLC (May 4, 2015), https://www.hawkeye-aircraft.com/private-aviation-versus-business-aviation-what-is-the-difference.
[129] *Id.*
[130] *Id.*

governs business aviation narrowly, but makes no mention of private jet use for pleasure to govern private aviation more generally.[131]

In 2009, the General Aviation Manufacturers Association (the "GAMA"), a trade group that includes the top private jet makers, issued the Commitment.[132] The policy committed business jet operations to three targets: improving fuel efficiency 2% per year from 2010 until 2020, achieving carbon-neutral growth from 2020, and reducing C02 emissions 50% by 2050.[133] These targets, however, now seem modest, when compared to the net-zero emissions goals from major corporations and national governments.[134] In 2018, GAMA provided an update on its climate commitment; however, it included no data on the industries' progress towards meeting the 2020 or 2050 targets.[135] Although the business aviation community "recognizes that [it] must do [its] part to reduce aviation emissions,"[136] no similar pledge has been made by the private jet community specifically.

The government has historically failed to enact legislation upon the aviation industry to curb its negative environmental impact. However, recent moves towards climate reform and ambitious goals set forth in the Aviation Climate Action Plan

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[131] *Business Aviation Commitment on Climate Change*, GENERAL AVIATION MANUFACTURERS ASSOCIATION (GAMA), at p. 1, https://gama.aero/wp-content/uploads/GAMA-IBAC-Joint-Position-on-Business-Aviation-Tackling-Climate-Change-1.pdf.
[132] *Id.*
[133] *Business Aviation Commitment on Climate Change: An Update*, GENERAL AVIATION MANUFACTURERS ASSOCIATION (GAMA), at p. 2, https://www.ebaa.org/app/uploads/2018/01/GAMA-IBAC_Environment_Brochure.pdf.
[134] Corbin Hiar, *Climate 'Stigma' Smudges Gleaming Image of Private Jets*, E&E NEWS (Aug. 20, 2021, 7:15 AM), https://www.eenews.net/articles/climate-stigma-smudges-gleaming-image-of-private-jets/.
[135] *Id.*
[136] *Business Aviation Commitment on Climate Change*, *supra* note 131.

indicate a potentially brighter future. Because the Plan pertains to the aviation industry generally, producers and users of smaller luxury aircraft must play a more substantial role in regulating themselves. The following solutions challenge the government and those within the private airline industry to use their power and wealth for the good of the environment.

V. POTENTIAL SOLUTIONS – ANALYSIS AND FLAWS

The devastating environmental impact of celebrities using private jets, especially for trips that travel short distances with few passengers, is not easily reversible. It is not impossible, however, to imagine potentially feasible ways to mitigate this negative impact on the environment moving forward. Potential solutions may include imposing a tax on the purchase of fuel or the jet itself, banning private jet use altogether, enacting more stringent regulations regarding the types of trips and number of passengers allowed on a given jet, encouraging the use of hybrid-electric planes, and/or holding celebrities publicly and socially responsible for their higher-than-average carbon footprint on the world. While these solutions may be effective, none are without drawbacks.

A. Tax and Fee-Based Solutions

There are a variety of ways a potential solution could involve the imposition of taxes on the aviation industry. In all these proposed tax solutions, the revenue earned via the tax should be earmarked to directly fund the 2021 United States Aviation Climate Action Plan. Specifically, the proceeds should contribute to the $4.3 billion SAF tax credit goal that is aimed at helping cut costs and scale production of

sustainable fuels for aviation.[137] With this extra revenue funding the Plan, sustainable aviation fuels can be more efficiently and timely developed and distributed in mass quantities. This will make the Plan's 2030 and 2050 goals much more achievable.

i. The FAA Should Raise the Excise Tax on Commercial Fuel

The FAA should increase the already effective excise tax on commercial aviation fuel. Because kerosene fuel is the most common type of aviation fuel used today, it should be the target of this tax.[138] The current tax on kerosene fuel used in commercial aviation, which includes private aviation, is $.044 per gallon.[139] The FAA may propose increasing this tax by a small percentage or by a nominal rate per gallon. The current tax proceeds would be unchanged, but the additional tax would directly fund the research, development, production, and distribution of sustainable aviation fuels. If the $0.44 excise tax is raised by even one cent per gallon, the revenues would increase exponentially. With this additional funding, sustainable aviation fuel would develop more rapidly, and the aviation industry could move away from kerosene gas more quickly.

A likely drawback of this proposed solution is that the entire aviation industry would be subject to the tax, rather than directly targeting private aviation. This issue may not be easily addressed due to the way the IRS defines commercial aviation,

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[137] *FACT SHEET: Biden Administration Advances the Future of Sustainable Fuels in American Aviation*, *supra* note 107.
[138] *Publication 510, Excise Taxes (Including Fuel Tax Credits and Refunds),* INTERNAL REVENUE SERVICE (July 2021), https://www.irs.gov/publications/p510.
[139] *Id.*

which includes private jet use.[140] To target celebrity private jet use, the FAA would need to adjust this definition to exclude private aviation and then propose this additional excise tax on only that sector of the industry. Doing so would place the burden on the wealthy individuals who use private jets, rather than the average consumer.

ii. An Additional Fee Should be Imposed on the Purchase and Charter of Private Jets

Another potential solution could be the implementation of a fee, or tax penalty, on the purchase or charter of a private jet. The amount and means of collecting such a fee would depend on the method of payment for the private jet. As discussed, there are four ways to finance a private jet: the outright purchase of the jet, partial ownership in a jet, charter of a jet, or private jet membership.[141] For the outright purchasing of a private jet or the partial ownership of one, an additional fee could be imposed on the purchase. For example, the fee could be a fixed percentage of the purchase price. If outright purchasing, the owner would solely be responsible for payment of this fee. If engaging in a partial ownership arrangement, the co-owners could split the fee amongst themselves. For the charter of a private plane, this additional fee may be added on a per flight basis. Each time a plane is chartered, the fee would be added. All of those on the chartered plane may split the fee amongst themselves, or the individual who is chartering the plane may pay it themselves.

[140] *See supra* texts accompanying note 125.
[141] *See supra* texts accompanying notes 36–42.

Lastly, an additional annual fee for private jet memberships could be added to the current membership fees for funding the sustainable aviation fuel movement.

Because the purchase and charter of a private plane is done less frequently than other commercial flying, this idea will generate revenue more slowly than the first proposed solution. However, in contrast to the critique for the previously mentioned tax solution, this proposed idea directly targets the wealthy celebrity population who is flying private most frequently. Accordingly, the idea will face backlash from this population. This idea will also likely face political criticism, as taxing the wealthiest population of citizens is a point of contention in politics.[142] For example, it may be argued that this population is unfairly bearing a larger burden of paying for the development of sustainable aviation fuels alone, when it should be borne equally by all. On the other hand, it may be argued that this population should be paying these additional fees because their private jet use is decaying the environment at a much more rapid pace than the average traveler on a per person basis. This is not to mention the argument that this is the class of people most capable of paying for it due to their wealth. This idea, as with the first, is not without its drawbacks, but could still be an effective way to raise funds for the production and distribution of sustainable aviation fuels.

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[142] Dani Di Placido*, The Controversy Over AOC's 'Tax The Rich' Dress, Explained*, FORBES (Sept. 15, 2021, 3:50 PM), https://www.forbes.com/sites/danidiplacido/2021/09/15/the-controversy-over-aocs-tax-the-rich-dress-explained (exemplifying the controversial and politically driven ideology regarding taxing the rich, as seen by Alexandria Ocasio-Cortez making a statement on the matter in her Met Gala, formally called the Costume Institute Gala, gown).

iii. Enact More Stringent Regulations on Private Jet Usage and Impose Additional Fee When Regulations are not Followed

The last potential fee or tax-based solution involves imposing an additional fee or tax on the charter of private jets for personal use that travels under a specified distance or with less than a specified number of passengers. This solution would require Congress to enact more stringent regulations concerning the minimum mile and passenger requirements for private jet use, especially for purely personal or pleasure trips. The proposed regulations do not have to be a complete ban on private flights for twelve minutes with two passengers, for example, like Kylie Jenner's trip.[143] However, it could require that trips like Jenner's, which carry few passengers over short distances, be taxed as a penalty for not following the regulation's guidelines. This penalty tax would act as a deterrent for celebrities to take frivolous trips with few passengers, in the hopes that they would instead opt for an alternative method of transportation that has less of an impact on the environment.

The primary concern with this proposed solution would come with governance. Questions that would arise concerning the implementation of this solution would include: What is to stop celebrities from lying about how many people were on board? How would the government know how many people were actually on a flight? What are the appropriate minimum requirements for the number of passengers and miles traveled? This solution may be the most challenging to implement, however, it could be the most efficient solution for reducing the number of private jets that take flight each day.

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[143] *See supra* texts accompanying notes 6–10.

B. Other Potential Solutions

i. Complete Ban on Short-Haul Flights

A more drastic potential solution would be a complete ban on all short-haul flights. While this idea may sound infeasible, it is actually being implemented in other parts of the world.[144] As of April 2022, the French government has done just that.[145] It became the first large economy in the world to ban short-haul flights altogether for the purpose of environmental protection.[146] This ban extends to any flight where a train or bus alternative of two and a half hours or less exists.[147] A flight that alternatively could be accomplished through a two hour train ride produces six times higher emissions for each passenger than if that journey was made by train.[148] The new rule is projected to eliminate twelve percent of all French domestic flights, which were largely rated as unnecessary by French air travelers.[149] The potential environmental impact of such a ban is evident. Accordingly, the United States could impose a similar ban to achieve similar results.

The central issue regarding this proposed solution is the lack of alternative methods of transportation in the United States, as compared to France. Europe's high speed train transportation system is vast, speedy, and expansive.[150] However, a

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[144] Alex Ledsom, *France Travel: Many Short-Haul Flights Outlawed From April*, FORBES (Apr. 03, 2022), https://www.forbes.com/sites/alexledsom/2022/04/03/france-travel-many-short-haul-flights-outlawed-from-april.
[145] *Id.*
[146] Leo Murray, *France's Ban on Short Flights Should be a Wake-Up Call for Britain*, THE GUARDIAN (Apr, 13, 2021, 10:37 EDT), https://www.theguardian.com/commentisfree/2021/apr/13/france-ban-short-domestic-flights-britain-air-travel.
[147] *Id.*
[148] *Id.*
[149] *Id.*
[150] Chelsea Graham, *Why Doesn't The US Have High Speed Rail?*, Sustainable America (Jan. 12, 2023), https://sustainableamerica.org/blog/why-doesnt-the-us-have-high-speed-rail/.

similar system does not exist in the United States.[151] A similar ban in the United States would have to focus instead on methods of transportation including bus and car. This would likely decrease the number of eligible short-haul flights that could be accomplished via other methods of transportation in similar or less time, as driving or bussing generally takes more time than the European high-speed trains. Additionally, this proposed solution would not only target celebrity private jet use, but also all commercial flights that are under a certain time. It is possible that a similar ban in the United States could be more restrictive and only ban private jet flights under a certain time. If done in this capacity, a complete ban would be the only effective method to eliminate Kylie Jenner style private jet flights altogether.

ii. Incentivize the Use of Hybrid-Electric Private Jets

Hybrid-electric cars have significantly grown in popularity in response to the climate crisis.[152] It seems to be that hybrid-electric planes are also on the horizon for the same reason, largely thanks to the aviation company Ampaire.[153] In 2019, Ampaire began testing and flying the first hybrid-electric planes.[154] These planes, whose combustion engines were replaced with a hybrid system, use both electricity and fuel for power.[155] Ampaire's CEO and co-founder explained that these flights measure over a thirty percent reduction in fuel compared to a traditional engine.[156]

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[151] *Id.*
[152] Carolyn Gramling, *How Electric Vehicles Offered Hope as Climate Challenges Grew*, SCIENCENEWS (Dec. 22, 2021 7:00 AM), https://www.sciencenews.org/article/electric-vehicles-cars-climate-change-challenges-2021.
[153] Sarah Pilla, *Ampaire hopes to revolutionize the skies with hybrid-electric airplanes*, SPECTRUM NEWS 1 (Feb. 28, 2022 9:10 AM), https://spectrumnews1.com/ca/la-west/transportation/2022/02/28/ampaire-is-revolutionizing-the-skies-with-hybrid-electric-airplanes.
[154] *Id.*
[155] *Id.*
[156] *Id.*

He also explains that the same core technology can be scaled to planes with up to 100 passenger seats.[157] The International Civil Aviation Organization also acknowledges the trend towards electrification across the aviation industry.[158] A heightened focus should be placed on the use of hybrid-electric aircraft for private jet use, as it could significantly reduce the carbon emissions from celebrities. In California, the Air Resources Board is offering rebates for the purchase or lease of all-electric or hybrid electric vehicles.[159] Another California initiative offers grants for the purchase of zero-emission busses to replace gas or diesel buses.[160] The FAA could implement a similar incentive program for the purchase or charter of hybrid-electric private jets.

The major hindrance of the use of hybrid planes would be the costs associated with them. Like hybrid cars, hybrid planes would likely be more costly to purchase, charter, and fly. However, should a celebrity have the option to purchase a gas-powered or electric-powered private jet, an incentive program such as the one proposed would make the price of an eco-friendlier option more comparable and attractive. This potential solution would support the 2050 zero-emissions goal; however, it would take longer to implement, as hybrid planes are a more recent technological development and are not commonly used at this point.

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[157] *Id.*
[158] *Electric and Hybrid Aircraft Platform for Innovation* (E-HAPI), ICAO, https://www.icao.int/environmental-protection/Pages/electric-aircraft.aspx.
[159] *California Laws and Incentives*, U.S. DEPARTMENT OF ENERGY – ENERGY EFFICIENCY AND RENEWABLE ENERGY ALTERNATIVE FUELS DATA CENTER (last visited Apr. 10, 2023)
[160] *Id.*

VI. CONCLUSION

The negative impact on the environment due to celebrities' private jet use is evident and in urgent need of change. While the environmental challenges plaguing the planet are not newly developed, the rate at which further damage is occurring is beginning to alarm the public in new ways. This is especially evident in the era of social media and the increasing infatuation with celebrities. Now more than ever before, people are noticing that celebrities, who make up such a small percentage of the population, are having the largest negative impact on the environment. The decision to travel via private jet not only impacts the individual celebrity's health and well-being, but also equally affects the health and well-being of every person on the planet.

The United States government is beginning to take strides to stall aviation emissions' detrimental effect on the planet. However, to achieve net-zero aviation emissions by 2050, and more generally, an environmentally healthy future, the United States Government needs to do more to combat this problem. There are a variety of tax and fee-based solutions to fund the 2021 United States Aviation Climate Action Plan, such as raising the current excise tax on commercial fuel, charging an additional fee on the purchase or charter of a private jet, or imposing additional fees on the charter of flights which travel minimal distances or with few passengers. Other solutions to reduce private jet emissions altogether may include a complete ban on short-haul flights or the implementation of an incentive program for the use of hybrid-electric jets over gas powered private planes. All these proposed

solutions would help prevent the climate crisis from soaring to new heights, which is essential to the wellbeing of our planet.