



**WRITTEN TESTIMONY OF  
JOEBEN BEVIRT  
FOUNDER AND CEO OF  
JOBY AVIATION**

**BEFORE THE  
HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE  
SUBCOMMITTEE ON AVIATION**

**FAA Reauthorization: Harnessing the Evolution of Flight  
to Deliver for the American People**

**March 28, 2023**

## **Introduction**

Good morning Chairman Graves, Ranking Member Cohen, and distinguished members of the House Transportation and Infrastructure Committee Subcommittee on Aviation.

My name is JoeBen Bevirt, and I am the Founder and CEO of Joby Aviation, a California-based company leading the charge in the emerging industry of advanced air mobility (AAM).

Since 2018, I have served as a member of the Board of Directors and the Executive Committee for the General Aviation Manufacturers Association (GAMA). Currently, I serve as the Chair of GAMA's Electric Propulsion and Innovation Committee (EPIC), where companies involved in AAM develop consensus to create an environment that supports the efficient design, production, operation and maintenance of electric vertical take-off and landing aircraft, or eVTOLs.

Additionally, Joby is a member of the National Business Aviation Association's Advanced Air Mobility Roundtable, which serves as a forum for high-level policy planning with sector leaders to chart a course for the integration of AAM technologies into the nation's airspace system.

At Joby Aviation, we are proud to be at the forefront of the era of electric aviation. Our primary focus is the development and certification of our piloted, all-electric aircraft, designed to transport up to four passengers at speeds of up to 200 mph, with zero operating emissions and low noise, which we intend to operate as part of an aerial ridesharing service.

To ensure the success of AAM, I encourage the Committee to consider two key themes. First, confirm the Federal Aviation Administration (FAA) remains focused on the implementation of straightforward policies companies can utilize on their first day of operations. For piloted aircraft like Joby, this means utilizing the existing system to the fullest extent practical; these aircraft are designed to work with existing airports, existing heliports and today's air traffic control system.

The second is to maintain the United States' position as the global leader in aviation. This requires strong regulatory and policy leadership from the Department of Transportation (DOT) and the Federal Aviation Administration (FAA). The country must maintain the FAA path

developed over the last decade, then take lessons from initial operations to make the aviation system even more vibrant. Success, in many ways, will come from the priorities you set in this year's FAA reauthorization bill and in your oversight of the agencies and regulators.

As this Committee considers definitions for AAM in the FAA reauthorization bill, we suggest it to be defined as *the next generation of inhabited aircraft with advanced automation, electric propulsion and/or low noise signature that are intended to open new opportunities for air transportation*. We believe this definition supports a broad portfolio of technologies for the limited purpose of policy development.

### **The FAA's path**

The FAA spent the last decade working across applicants, researchers and standards bodies to create a thorough and well-designed path for the design, certification, and operations of electric aircraft that builds on the remarkable safety learnings from decades of traditional aircraft certification projects. As the global eVTOL market continues to expand, standing behind these key policies along with consistent and reliable decision-making by the FAA will be crucial in ensuring that the U.S. aviation industry continues to thrive.

At Joby, we applied for type certification with the FAA in 2018 and since that time, thousands of key decisions have been documented across the program. Joby is quickly moving into the implementation phase of certification, and now has the majority of our area-specific certification plans approved by the FAA. These plans cover crucial aspects of Joby's aircraft design, performance, and safety features, demonstrating our commitment to meeting or exceeding regulatory requirements. By working closely with the FAA, Joby has ensured that the novel technologies included in our aircraft design align with the necessary airworthiness criteria and safety standards.

Our regular engagement with the FAA is built on the transparent and collaborative relationship established over the last five years of our certification program. As we move from policy

development into oversight execution, it is important for FAA certification resources to be available to review test plans, witness testing and accept final reports.

Continued U.S. leadership in both technology development and regulatory definition requires minimizing unnecessary changes that delay progress. Consistent decision-making by the FAA is vital not only for the successful certification and integration of eVTOL aircraft into the National Airspace System (NAS), but also to ensure the competitiveness of the American aerospace industry in the global market. Maintaining a stable and predictable regulatory environment is key to securing America's leading position in the next era of aviation technologies.

Foreign regulators in China and Europe are working to form their own regulations for electric aviation. If the FAA fails to maintain its leadership position, other countries will dictate how future aircraft are manufactured and operated, putting American companies at a disadvantage in the global market.

Following the FAA decision to regulate eVTOL aircraft as powered lift, the agency needs to provide operating rules for this class of aircraft. These rules will be issued through Special Federal Aviation Regulations (SFAR), which the FAA has committed to delivering by December 31, 2024.

We were pleased to hear that the agency's proposed SFAR has been forwarded from FAA to DOT one month ahead of schedule, but there is more to be done. We hope Congress will partner with us to ensure the process is completed on time, as well as create an interim policy to enable early commercial operations if the rulemaking process misses this deadline or a company achieves type certification prior to rule completion.

### **A long term solution for the future of vertical aviation infrastructure**

Joby appreciates the leadership of Chairman Garret Graves, Ranking Member Rick Larsen and Ranking Member Dina Titus for ensuring passage in the FY 2023 Omnibus of the Advanced Aviation Infrastructure Modernization Act (AAIM Act), authorization for planning grants to

facilitate the investment in Advanced Air Mobility infrastructure. An investment in community planning is an important step when thinking about infrastructure, especially in considering how to maximize the infrastructure that already exists.

Our national aviation heritage is anchored in infrastructure. Thanks to decades of investment, the U.S. is home to nearly 13,000 airports and 6,000 heliports. This system, which is a mix of both public and private infrastructure, has enabled our aviation industry to flourish over the past 50 years. AAM will present new mobility options for people in rural and urban communities and help revitalize much of this infrastructure.

For the long-term success of the aviation industry, it is critical that eVTOL aircraft can operate out of all forms of aviation infrastructure – including airports and heliports – as well as permit new sites to support industry growth. If eVTOL is unable to use existing aviation infrastructure, it will drastically impact our nation’s ability to lead in the future of flight since it will require all new infrastructure to be permitted for operations to begin.

We must have a clear pathway to day-one operations for existing infrastructure. While we are pleased with the FAA’s Office of Airports’ proactive approach to new entrants, a lack of clear direction and guidance at the federal level, with respect to existing heliports and airports, has resulted in confusion and ambiguity at the state and local level. Our eVTOL aircraft, like most others undergoing type certification, has been designed to use existing heliports and airports on day one.

We would encourage Congress to establish a definition in U.S. Code for heliports that indicates they are used or intended to be used by any aircraft capable of vertical takeoff and landing. We believe that existing frameworks for heliport design, planning, permitting and approval are suitable both for heliports and future vertiports. As we look to the future, we see vertiports as a type of heliport that can meet community needs through appropriate noise standards and limitations.<sup>1</sup>

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<sup>1</sup> See, <https://transportation.house.gov/calendar/eventsingle.aspx?EventID=405816>

## **Workforce Development**

We often focus on the transportation benefits made possible by AAM, but the revolution in electric propulsion has widespread economic benefits, including clean technology jobs in manufacturing and operations. AAM is estimated to add nearly \$1 trillion and 400,000 jobs<sup>2</sup> to the economies around the world that invest in it. At Joby, we are committed to playing our part in driving this economic driver and creating a more sustainable and efficient transportation system for all.

The industry will need to grow its workforce, including skilled manufacturing technicians, aircraft maintainers, new pilots, and new ground staff. We're doing our part to cultivate a vibrant and diverse workforce.

For example, we're partnering with Aviation Career & Technical Education High School in New York City – a unique high school offering rigorous instruction and equitable access to aviation curricula followed by steady work as aircraft maintainers.

In Marina, we're working with Monterey Bay Drone, Automation and Robotics Technology (DART) Initiative and the James Irvine Foundation to establish apprenticeship programs that include paid on-the-job training for Salinas Valley locals interested in upskilling.

We're laying the groundwork for a pilot academy that will radically reduce the economic cost of becoming a commercial pilot and lower the barrier to entry.

As this Committee considers FAA Reauthorization, we kindly request policies that broaden access to aviation careers, such as the expansion of the Aviation Workforce Development Grant, decrease the cost of flight training, fund apprenticeship programs, and explore new technologies, such as the use of virtual reality for flight training.

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<sup>2</sup> See, [https://panetta.house.gov/sites/panetta.house.gov/files/documents/2023.02.23\\_DOT\\_AAM%20Leadership%20Letter.pdf](https://panetta.house.gov/sites/panetta.house.gov/files/documents/2023.02.23_DOT_AAM%20Leadership%20Letter.pdf)

## **Ensuring Maturation of Industry after Commercialization**

We are grateful to Chairman Garrett Graves, Congresswoman Sharice Davids, and members of the Committee for introducing and passing the “Advanced Air Mobility (AAM) Coordination and Leadership Act,” which created an interagency working group intended to coordinate efforts “necessary for [the] maturation of the AAM ecosystem in the United States, particularly passenger-carrying aircraft.”

We support the interagency working group’s efforts, as codified, to “grow new transportation options; amplify economic activity and jobs; advance environmental sustainability and new technologies; and support emergency preparedness and competitiveness<sup>3</sup>.” Collaboration and information-sharing among the members of the interagency working group is crucial to long-term maturation of eVTOLs, as regulatory, policy and infrastructure decisions made today can support the future growth and development of the AAM ecosystem.

We hope the working group will expand upon the strong foundation of U.S. government leadership on AAM technology and commercialization displayed by NASA, through its ongoing research with industry partners into acoustics, airspace modernization, and aircraft operations; and the Department of Defense’s Agility Prime program, which has actively invested in emerging aviation technology development for many years.

## **Conclusion**

This is a defining moment for aviation – the first propulsion revolution the world has seen since the dawn of the Jet Age, with the potential to bring people and goods closer together than ever before, in both rural and urban communities. As cleaner and quieter aircraft are introduced into the market, it is imperative that the United States continue to set the global standard for aviation safety while championing the industry’s transition to climate-neutral methods of flight.

I thank you for your time, your passion, and your leadership.

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<sup>3</sup> See, <https://www.congress.gov/bill/117th-congress/senate-bill/516/text>