

To: U.S. Senate Commerce Committee and U.S. House Transportation & Infrastructure Committee staff  
From: Robert Poole (bob.poole@reason.org), Marc Scribner (marc.scribner@reason.org)  
Date: June 12, 2023  
Re: FAA reauthorization recommendations from Reason Foundation

\* \* \*

Thank you for the opportunity to submit recommendations on the forthcoming Federal Aviation Administration reauthorization. Each recommendation includes a summary of its purpose and is accompanied by either in-text legislative language or specific provisions that should be included in future legislation. We are happy to discuss any of these proposals in more detail.

**Table of Contents**

Encouraging Adoption of Space-Based ADS-B in Air Traffic Control ..... 2  
Encouraging Deployment of Remote/Digital Airport Control Towers ..... 5  
Modernizing NOTAM Infrastructure ..... 7  
Reforming the Aviation Consumer Protection Authority ..... 8  
Modernizing the Passenger Facility Charge ..... 9  
Separating the Air Traffic Organization from the FAA ..... 10

## Encouraging Adoption of Space-Based ADS-B in Air Traffic Control

Although nearly all countries with commercial air service have radar surveillance of their skies, there is no radar coverage of about 70% of the Earth's surface (oceans, polar regions, mountains, and deserts). ADS-B is a new form of air traffic surveillance, and the majority of commercial airliners and business jets are equipped to send out ADS-B signals reporting their position, altitude, velocity, etc. But ADS-B in the United States covers only flights over land. When U.S. aircraft traverse the oceans, polar regions, etc., they are tracked by neither radar nor ADS-B.

In recent years, global ADS-B has become available from orbiting satellites. For example, on the North Atlantic, airliners and business jets report their information every 8 seconds via space-based ADS-B. The six air traffic providers that manage the North Atlantic airspace—the U.K.'s NATS, Nav Canada, Iceland, Ireland, Norway, and Portugal—subscribe to space-based ADS-B. So do other air traffic providers covering more than 50% of the world's airspace.

But the FAA does not. It recently tried out the service in the Caribbean, but too many small planes there are not adequately equipped with ADS-B, and the performance was not sufficient due to radio-frequency interference near the Florida coast.

By contrast, FAA manages a vast amount of oceanic airspace between North America and Asia/Australia. Were FAA to implement space-based ADS-B there, the benefits for trans-Pacific air traffic would be similar to the improvements over the North Atlantic: shorter flight times (because most planes can now fly with the best tailwinds or least headwinds), less fuel burn, and reduced carbon footprints—as well as increased safety due to knowing more-precisely where aircraft are at all times.

Although FAA studied space-based oceanic ADS-B in 2022, it has made no decision to implement this major improvement, which is desired by U.S. airlines, pilots, and air traffic controllers.

Congress should direct FAA to implement space-based ADS-B for Pacific oceanic airspace and also for improved search-and-rescue operations in portions of the continental U.S. where there is no radar coverage:

Sec. \_\_\_\_\_. Use of Advanced Surveillance

- a) In General.—Not later than 120 days after the date of enactment of this Act, the Administrator shall develop and implement a plan to—

(1) use space-based ADS-B surveillance, within United States airspace or international airspace delegated to the United States for—

(A) positive air traffic control, including separation of aircraft by implementing the ICAO Advanced Surveillance-Enhanced Procedural Separation standard;

(B) air traffic flow management;

(C) search and rescue;

(D) accident investigation; and

(E) data analytics.

(2) coordinate with counterparts at air service navigation providers in airspace that is adjacent to United States airspace or international airspace delegated to the United States to—

(A) adopt reduced separation standards in oceanic airspace;

(B) implement procedures that will permit user preferred routes to increase fuel efficiency and reduce greenhouse gas emissions; and

(C) exercise leadership on setting global standards by harmonizing the safety and efficiency of air traffic operations in airspace neighboring airspace delegated to the United States.

(b) Report.—Not later than 90 days after the date the plan under subsection (a) has been completed, the Administrator shall submit to the appropriate committees of Congress a report that—

(1) details the actions the Administrator must take to implement the plan required under subsection (a), including defining the required technical system upgrades, operational procedure modifications, new training requirements, and the transition plan.

(2) details a schedule with milestones to use advanced surveillance systems and coordinate with international air service navigation providers under subsection (a);

(3) describes anticipated safety enhancements, fuel and operating cost savings and reduction in carbon emissions of aircraft operating through airspace controlled under subsection (a).

## **Encouraging Deployment of Remote/Digital Airport Control Towers**

Over the last decade, a revolution has occurred in airport control towers. Instead of constructing a very tall building with an observation room at the top, air traffic service providers in Europe have pioneered “remote/digital towers.” The control room is located at ground level, and sensors (regular and infrared cameras) and communications equipment are strategically located at various points on the airfield. Such systems have been certified and are in operation in Germany, Norway, Sweden, and the U.K., and are under way in other countries; Romania in February 2023 opened its first remote tower.

Remote/digital towers cost less to build and maintain. Moreover, they deliver superior performance. Controllers can see aircraft and runway ends despite rain, fog, or other weather conditions. On their display screens in the control rooms, they can attach electronic tags to moving aircraft targets. Germany, Norway, and Sweden are already managing traffic at multiple small airports from a single remote tower center.

No remote/digital towers have been certified by FAA in this country. The only two projects—at Leesburg, Virginia, and Loveland, Colorado—have been funded by state and private sources, though FAA has provided controllers to monitor their operations. Congress in the 2018 FAA reauthorization established a Remote Tower Pilot Program and identified six slots for eligible airports—but no projects have been approved by FAA. The agency has indicated that for the foreseeable future it does not intend to establish a remote tower program or a Remote Tower Program Office.

In the 2023 reauthorization, Congress should take steps to require FAA to begin serious implementation of remote towers, starting with general aviation airports, as follows:

- Require FAA to initiate a review of how Remote Towers can be utilized to reduce cost and environmental impact of building and sustaining traditional (Federal and non-Federal) air traffic control towers and enabling more resilient and cost-effective staffing of those towers.
- Require FAA to submit a report to the House Transportation and Infrastructure detailing the findings of the above review and proposing a time-phased roadmap for how Remote Tower technologies will be utilized in the National Airspace System.
- Require FAA to establish a certification process specifically for Remote Towers, relying in part on outside expertise to streamline the process.
- Require FAA to publish a final set of Remote Tower certification requirements based on the support and feedback of vendors and other knowledgeable subject matter experts no later than 150 days after enactment of the Reauthorization Act.
- Fully fund the Remote Tower Pilot Program included in the 2018 FAA reauthorization law.
- Require FAA to budget for evaluating and certifying Remote Tower systems as an alternative to a traditional tower.
- Require FAA to develop Remote Tower eligibility criteria to facilitate testing remote towers in collaboration with vendors and subject-matter experts.
- Require FAA to allow Remote Tower testing and certification to take place at the airports in question, rather than at the FAA Technical Center.

- Require FAA to create a Remote Tower siting tool.
- Require FAA to allow airports that have implemented a Remote Tower that has received Operation Viability Decision (OVD) to be eligible for inclusion in the Federal Contract Tower (FCT) Program and be eligible to use the full spectrum of AIP funding for the Remote Tower.
- Require FAA to allow general aviation and non-primary commercial airports in the current National Plan of Integrated Airport System (NPIAS) and the FCT Program to establish a Remote Tower as an alternative to a conventional control tower.
- Require FAA, within one year, to certify a non-FAA (commercial) radar display capable of displaying primary and secondary radar targets for use by controllers in Remote and FCT Program towers.
- Require FAA to terminate its Sustainable Tower Design Initiative, which would perpetuate more-costly conventional control towers.

Congress should amend the Airport Improvement Program to incorporate remote/digital towers:

Section 47124(b) (3) (B) of Title 49, United States Code, is amended in clause (ii) by inserting “, or a remote airport traffic control tower (Remote Tower) that has received an Operational Viability Decision (OVD)”, before “as required for eligibility under the Contract Tower Program.”

Section 47124(b) (4) (A) of Title 49 of the United States Code, is amended in each of clauses (i) (III) and (ii) (III) by inserting “, including remote airport traffic control tower (Remote Tower) equipment that has received an Operational Viability Decision (OVD) by the Federal Aviation Administration”, after “1996”.

Section 47114(d) (3) (A) of Title 49, United States Code, is amended by inserting clause (iii) “Primary and non-primary airports listed in the National Plan of Integrated Airport System (NPIAS) may utilize Airport Improvement Program (AIP) grant funds for reimbursement of the cost of acquiring and installing equipment for a remote airport traffic control tower (Remote Tower). All on-airport and remote facility equipment shall meet the requirements of the Federal Contract Tower (FCT) Program. Eligibility for funding under this section is conditioned upon Federal Aviation Administration granting of Operational Viability Decision (OVD) certification of the remote tower to provide airport traffic services from a remote location.”

## Modernizing NOTAM Infrastructure

The current Notice to Air Missions (NOTAM) infrastructure is not built to current standards and lacks cyber protection. It is a patchwork of legacy software and hardware, not fully documented, and difficult to modernize, utilizing obsolete applications. Moreover, in its antiquated format, it mixes huge amounts of marginally relevant data with some important safety-relevant information that can be hard for users to find. Rather than attempting to modernize the existing hardware and software, FAA should develop a replacement system from scratch, both hardware and software.

It is critically important that the new NOTAM system be designated as “critical” infrastructure, which the legacy system is not. Critical infrastructure must have .99999 availability, versus “essential” infrastructure at .999 availability.

To develop the replacement system, FAA should designate an experienced in-house systems engineer to lead the project. The leader should build an internal team consisting of:

- Program manager (leader)
- Chief engineer
- Contracting officer
- Legal expert
- Scheduler
- Finance/business manager

The team should report directly to the ATO’s COO or to the FAA Administrator to reduce any bureaucratic impediments in development via continuous executive visibility. The team should develop an Operational Requirements document followed by a performance specification, not a design document, with input from aviation stakeholders via holding an Industry Day. This will lead to a draft plan and schedule for the project.

FAA should seek proposals from industry, and award two contracts to produce two prototype systems for evaluation by the project team and aviation stakeholders. FAA should use its Sole Source authority due to the urgent and compelling need for the replacement system. Due to the critical importance of replacing the legacy NOTAM system, Congress should insist on the following schedule:

- Project team selected within 30 days of enactment of the legislation.
- Draft NOTAMs program plan completed within 60 days of enactment.
- Industry Day held within 75 days of enactment.
- Proposals from potential contractors due within 90 days after Industry Day.
- Prototypes delivered to FAA within six months of contract award.
- Prototypes demonstrated to participants at a 2<sup>nd</sup> Industry Day within one month of receipt of prototypes; report to Congress 14 days later.
- Formal industry feedback to FAA within 21 days of 2<sup>nd</sup> Industry Day.
- Preferred system selected and contract awarded within 30 days of industry feedback.
- Preferred system delivered to FAA within six months of contract award.

## **Reforming the Aviation Consumer Protection Authority**

Section 41712 of Title 49 of the U.S. Code contains an ill-defined definition of “unfairness.” This nebulous statute has been used in recent years by the Office of the Secretary of Transportation to engage in a variety of re-regulatory activities, including new restrictions on airfare advertising, outlawing true nonrefundable ticketing, and an inflexible tarmac delay rule suspected of increasing flight cancellations—particularly at smaller and more rural airports.

More recently, the Department of Transportation has suggested it would pursue new regulations aimed at limiting ancillary fees—optional charges needed by ultra-low-cost carriers to compete and to continue exerting downward pressure on average airfares that benefit all consumers.

We propose an amendment that would adopt a revised definition of “unfairness” that provides standards of proof long used by both the Federal Trade Commission (15 U.S.C. § 45(n)) and Consumer Financial Protection Bureau (12 U.S.C. § 5531(c)) to balance countervailing benefits to consumers or to competition against unfairness claims.

To bring the aviation consumer protection authority into alignment with other federal prohibitions on unfair conduct and ensure better regulatory quality and enforcement consistency, Congress should amend the existing statute by adding a new subsection (d) at 49 U.S.C. § 41712 to read:

(d) Unfairness defined; standard of proof

The Secretary shall have no authority under this section to declare unlawful a practice or method of competition on the grounds that such practice or method of competition is unfair unless the practice or method of competition causes or is likely to cause the substantial injury to consumers which is not reasonably avoidable by consumers themselves and not outweighed by countervailing benefits to consumers or to competition.



## **Modernizing the Passenger Facility Charge**

Congress first authorized passenger facility charge collections three decades ago as a narrow exception to the general prohibition on airports collecting user fees from airline passengers. The statutory cap was initially set at \$3 on the first two enplanements of a trip and subsequently raised in 2000 to \$4.50. To charge a \$4.50 PFC, airports must forgo 75% of their Airport Improvement Program grant apportionments. Due to inflation, PFC purchasing power has declined by approximately half since the cap was last raised.

The PFC was designed to allow airports to be less dependent on federal aid. It was also understood that PFC collections can promote airline competition by providing airports own-source revenue that can be used to finance improvements without undue influence from dominant incumbent carriers, who regularly exercise their market power to manipulate investment decisions for their benefit at the expense of their competitors. One area most impacted is gate financing and construction, whereby dominant carriers can leverage their stronger positions to negotiate preferential-use gate leases with airports. Economists have estimated that limited gate access raises consumer airfares by several billion dollars per year.

To address these problems, Congress could eliminate the statutory cap while simultaneously requiring airports charging PFCs greater than \$4.50 to forgo 100% of the AIP apportionments. Congress could then proportionately reduce the annual AIP reauthorization to account for this forgone grant revenue. Taking these actions would encourage airport self-help, enhance airline competition, and reduce federal spending by several hundred million dollars per year.

In the 115<sup>th</sup> Congress, Reps. DeFazio and Massie introduced H.R. 1265, *Investing in America: Rebuilding America's Airport Infrastructure Act*, which proposed eliminating the statutory PFC cap, requiring 100% AIP turn-back for airports instituting PFCs above \$4.50, and making a corresponding reduction in AIP grants of \$400 million per year.

## **Separating the Air Traffic Organization from the FAA**

The FAA's organizational structure builds in a conflict between air safety regulation and operating and managing the air traffic control (ATC) system. All other aviation entities are regulated for safety at arm's length: airports, airlines, aircraft and engine producers, pilots, repair stations, etc. Only the air traffic control system is self-regulated because it is an integral part of the aviation safety regulator.

Self-regulation is poor policy. Congress recognized this in 1974 when it separated safety regulation from the Atomic Energy Commission, moving it to a newly created Nuclear Regulatory Commission. ICAO recognized the self-regulation conflict in 2001, revising its Safety Oversight Manual (Doc. 9734) calling for "a clear separation of authority and responsibility between the State operating agency and the State regulatory authority." By 2008, out of 84 reporting governments, 64 had separated air safety regulation from ATC operation. Today, nearly every developed nation has carried out this separation—except the United States.

FAA's response to the ICAO policy was to create a new Office of Air Traffic Safety Oversight (AOV). But this office issues no safety standards or Federal Air Regulations. It is entirely internal, and its decisions are exempt from the Administrative Procedure Act.

The former head of the Aviation Safety Commission, Clinton Oster, has long criticized self-regulation of the ATC system. So did Vice President Al Gore's National Performance Review and a subsequent study by DOT's Office of the Secretary in 1994, stating that arm's-length regulation would likely bring about "an enhanced level of air safety." A 2008 study from the Brookings Institution proposed making FAA's Air Traffic Organization (ATO) a separate modal agency within DOT, regulated for air safety by FAA.

Congress should separate the ATO from the FAA to end self-regulation, improve air safety, and enable the ATO to operate more like a high-tech aviation service provider. The start-up of ATO in 2004, in response to a Clinton administration executive order in 2000, brought together all of FAA's ATC-related functions into a unit headed by a chief operating officer (COO). The new separate ATO would be headed by a chief executive officer (CEO). Only a few shared administrative functions of FAA would need to be divided between the new ATO and the remaining FAA. The Brookings study also suggested that that the new ATO be physically separated from FAA headquarters in Washington, D.C.; some have suggested locating it adjacent to the ATC command center in Warrenton, Virginia, 45 miles west of D.C.

Congress should carry out this reorganization along the following lines:

- Within 12 months of enactment of this legislation, complete the internal reorganization and separate the ATO as a new modal agency within DOT.
- New-ATO should be funded directly from the Airport and Airway Trust Fund and include an 18-month reserve fund.
- Create a Board of Directors composed of aviation stakeholders for New-ATO within 12 months of enactment.

- Board to appoint New-ATO's first CEO within 18 months of enactment.
- Select new quarters for New-ATO and relocate staff and equipment within 24 months of enactment.
- Permit the CEO and Board to develop a new non-civil-service personnel system, to take effect within 36 months of enactment.