Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington DC 20515

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June 2, 2017

SUMMARY OF SUBJECT MATTER

TO: Members, Committee on Transportation and Infrastructure
FROM: Staff, Committee on Transportation and Infrastructure
RE: Full Committee Hearing on "Building a 21st Century Infrastructure for America: Federal Aviation Administration Authorization"

PURPOSE

The Committee on Transportation and Infrastructure will meet on Thursday, June 8, 2017, at 9:30 a.m. in 2167 Rayburn House Office Building to hold a hearing on "Building a 21st Century Infrastructure for America: Federal Aviation Administration Authorization". The purpose of this hearing is to hear testimony from the Secretary of Transportation, Elaine Chao, on issues related to the Federal Aviation Administration (FAA), the programs it administers, and FAA authorization and reform.

BACKGROUND

The last multi-year FAA authorization, the *FAA Modernization and Reform Act* (P.L. 112-95; *FMRA*) was signed into law in 2012. The *FMRA* provided nearly $16 billion annually for fiscal years 2012-2015 for FAA programs and operations. Since October 2015, the FAA has been authorized by a series of extensions, the latest being the *FAA Extension, Safety, and Security Act of 2016* (P.L. 114-190; *2016 FAA Extension*) which extends the authorities and taxes included in *FMRA* through September 30, 2017.[1] It also authorizes certain critical, time-sensitive reforms.

In light of the significant contributions of commercial and general aviation to the Nation's economy, it is important that Congress enact a multi-year, transformational authorization bill. The bill must update and streamline FAA policies and programs. It must also resolve the systemic problems of bureaucratic red tape, government dysfunction, conflicts-of-interest, and funding volatility that have plagued air traffic control (ATC) modernization despite the expenditure of billions of dollars. The establishment of an ATC service provider separate

[1] Prior to the 2016 FAA Extension, the FAA's authorities and taxes authorized in FMRA were extended through March 31, 2016, in P.L. 114-55, and again through July 15, 2016, in P.L. 114-141.

from the safety regulator has proven to be an effective solution to such problems in a number of international instances over the last three decades.

This memorandum outlines some of the policies, programs, processes, and issues likely to be discussed in the context of a comprehensive, multi-year FAA authorization bill.

FAA Safety Oversight and Certification Responsibilities

The primary mission of the FAA is ensuring aviation safety. The FAA has the responsibility to certify, monitor, and regulate the safety and operation of the civil aviation industry, including airlines, general aviation, unmanned aircraft systems (UAS), airports, commercial space transportation, repair stations, and aircraft manufacturers. The FAA is also responsible for establishing licensing and training requirements for pilots, flight attendants, maintenance workers, controllers, inspectors, and other aviation professionals. Aviation safety is dependent upon, among other things, rigorous training, the sharing of safety critical information, and strong oversight.

The FAA is responsible for developing certification standards that ensure the safety of design and production of aircraft, aircraft components, and other avionics. To this end, the FAA has an extensive system of oversight and certification to confirm that the design and production of aircraft and aircraft components meet specific safety standards. These processes can often be time-consuming and costly for aviation manufacturers.[2] FMRA directed the FAA to find ways to improve and streamline certification processes, reduce delays, and harmonize regulatory standards both domestically and internationally.[3] In response, stakeholder-working groups recommended ways to streamline aircraft certifications and address inconsistent regulatory interpretations. The FAA authorization bill will address these important recommendations.

Airport Infrastructure

Airports are key economic drivers in communities throughout around the United States. To finance capital needs, airports use a combination of federal grants, federally authorized local airport charges, state and local grants, and airport operating revenues.[4] The primary federal grant program for funding airport development and planning is the Airport Improvement Program (AIP). The AIP is funded entirely by the Airport and Airway Trust Fund (Trust Fund), which is supported entirely by taxes on aviation users. The AIP is primarily used for improvements related to enhancing safety, capacity, security, and environmental concerns. Airport sponsors can also use AIP funds, in most cases, on airfield capital improvements or repairs and, in some specific situations, for terminals and hangars. The AIP is currently authorized at $3.35 billion.

Because the AIP does not cover all airport capital needs, Congress has authorized airports to collect a fee on passengers called the passenger facility charge (PFC). A PFC is approved by the federal government, collected by the airlines, and paid directly to the airport without passing through the federal Treasury. The PFC is intended to supplement, not replace, AIP funds.

[2] 14 C.F.R Parts 21, 23, and 25.
[3] Sections 312 and 313 of the *FAA Modernization and Reform Act of 2012.* (P.L. 112-95.)
[4] Tang, Rachel Y., Congressional Research Service, "Financing Airports Improvements" (May 10, 2017).

Airports can use PFCs to build critical infrastructure projects at their facilities. However, unlike AIP funds, airports can use PFC revenue for gates, airline ticket areas, and debt service payments on bonds that airports issue to finance infrastructure projects. In 2016, the FAA estimated that airports collected approximately $3.2 billion from PFCs.[5]

General Aviation

General aviation (GA) consists of flight activity for personal and business use including most flight training. GA aircraft range from helicopters and piston-engine aircraft to large transport aircraft capable of intercontinental flight. According to the FAA, "…the long term outlook for general aviation is favorable, led by gains in turbine aircraft activity." However, the FAA predicts that the largest segment of the fleet, fixed-wing piston aircraft, will continue to shrink.[6] In addition, according to FAA forecasts, "…the number of active general aviation pilots (excluding [Air Transport Pilots]) is projected to decrease about 5,000…" between 2016 - 2036.[7]

Over the past decade, Congress has taken steps to revitalize the GA industry and reverse its decline. In 2013, Congress passed the *Small Airplane Revitalization Act* (P.L. 113-53; *SARA*), which requires the FAA to update regulations relating to GA aircraft with performance-based standards. The *2016 FAA Extension* requires the FAA to reform third-class medical certification for GA pilots in order to lessen a significant cost barrier to recreational flying. Last year's FAA authorization bill contained a number of provisions designed to reduce the cost of GA flying and improve safety.[8] Revitalizing GA, attracting young people to aviation professions, and ensuring the continuity of ATC services to small, rural, and remote communities, that both support and rely upon GA, are continuing goals of FAA authorization legislation, and will be addressed in the bill.

Commercial Air Service

Commercial air service is made up of a number of types of passenger and freight service. In 2015, approximately two million passengers flew on domestic and international flights operated by U.S. airlines each day.[9] Major U.S. passenger airlines often partner with regional airlines operating smaller aircraft to fly routes or during certain times of the day that cannot be economically served otherwise. Internationally, major U.S. passenger airlines form alliances with foreign airlines to mutually expand their global networks. In recent years, a group of "ultra" low-cost carriers has also emerged to compete for passenger services. Additionally, the transportation of freight by air is also substantial: in 2014, over 64 billion ton-miles of freight

[5] FAA Key Passenger Facility Charge Statistics, https://www.faa.gov/airports/pfc/monthly_reports/media/stats.pdf.
[6] FAA Aerospace Forecast, 2016-2036, p. 2.
[7] *Id.* at 25.
[8] The GA-related provisions included certification and regulatory interpretation reform, an increase in the length of aircraft registration periods, reforms to the FAA Contract Tower Program, and provisions to address the need for adequate FAA safety staffing.
[9] Bureau of Transportation Statistics, "2015 U.S.-Based Airline Traffic Data" https://www.rita.dot.gov/bts/press_releases/bts018_16

passed through U.S. airports.[10] Finally, charters operate over 10,000 aircraft, serving the largest cities and rural communities lacking scheduled service.[11]

Commercial air service issues of interest:

- *Commercial regulation of airlines*: In 1978, the *Airline Deregulation Act of 1978* (P.L. 95-504; *ADA*) eliminated most economic regulation of the industry in favor of allowing market forces to determine domestic airfares, routes, and levels of service. The elimination of government regulation of fares and routes has resulted in lower fares and a wide variety of price and service options.[12]

- *Essential Air Service (EAS) program*: The *ADA* included the EAS Program to ensure that small communities that were served by certificated air carriers before deregulation maintain a minimal level of scheduled air service. EAS has been reformed many times since 1978, most recently in *FMRA*, to improve service and control costs. The EAS program is important to ensuring air service to small and rural communities with limited alternative transportation options.

- *Open Skies*: In 1992, the United States entered into its first "Open Skies" agreement which eliminated most governmental limits on international services. Since that time, the United States has entered into Open Skies agreements with 100 countries.[13]

Airline Consumer Issues

In the decades since airline deregulation, Congress has passed a number of laws to improve airline consumer protections, most recently in the *2016 FAA Extension*.[14] Consumer issues addressed include the treatment of passengers with disabilities, excessive tarmac delays, compensation for delayed baggage, and the establishment of the Advisory Committee for Aviation Consumer Protection.[15]

Recent, high-profile incidents involving the poor treatment of airline passengers have resulted in renewed focus on airline customer service. Of particular interest are airline policies related to overbooking, voluntary and involuntary bumping of passengers, and compensation for passenger inconvenience. Additionally, as airlines now offer different levels of service and seat choice, and "unbundled" amenities, there is interest in the information available to consumers. Finally, there is also interest in updating policies related to passengers with disabilities.

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[10] Federal Aviation Administration, "The Economic Impact of Civil Aviation on the U.S. Economy" p. 4. https://www.faa.gov/air_traffic/publications/media/2016-economic-impact-report_FINAL.pdf

[11] Study of Operators Regulated Under Part 135, April 2016. Available at: http://nata.aero/data/files/gia/4656_001.pdf (p. ES-2)

[12] U.S. DOT, https://www.transportation.gov/airconsumer/fly-rights

[13] U.S. Department of State, "Open Skies Agreements" https://www.state.gov/e/eb/tra/ata/

[14] See *Air Carrier Access Act* (P.L. 99-435); *Vision 100—Century of Aviation Reauthorization Act* (P.L. 108-176); *FAA Modernization and Reform Act of 2012*. (P.L. 112-95.); and *FAA Extension, Safety, and Security Act of 2016* (P.L. 114-190).

[15] https://www.transportation.gov/airconsumer/ACACP

Unmanned Aircraft Systems

Since the early 1990's, UAS, or drones, have operated in the national airspace, mostly in support of governmental operations related to national defense and homeland security.[16] In recent years, the private sector has developed a range of civil applications for UAS, including aerial photography, surveying, agriculture, communications, environmental monitoring, and infrastructure inspection.[17] Some companies have even announced plans for small package delivery using UAS.

The emergence of UAS offers substantial opportunities and raises important policy issues, such as airspace rules, privacy concerns, and aviation safety. Both *FMRA* and the *2016 FAA Extension* include a number of provisions facilitating the safe integration and oversight of UAS. The increasing demand for UAS operations in the National Airspace (NAS), as well as safety, security, and local privacy and policing interests will be topics of continued interest in the FAA authorization.

Other authorization issues

In addition to the issues discussed above, the hearing may also touch on the following:

- *FAA Contract Tower Program*: Federal contractors provide air traffic control services at visual flight rule airports. FAA oversees the safe operation of these towers. As of February 2017, there are 253 contract towers in the NAS**.**

- *Commercial Space Transportation:* Under the *Commercial Space Launch Act of 1984* and subsequent legislation, the Secretary of Transportation has the responsibility to facilitate, regulate, and promote the commercial space transportation industry. This function has been assigned to the FAA's Office of Commercial Space Transportation (AST), which issues launch and reentry licenses, permits for experimental launches, and launch site licenses for spaceports. As the pace and complexity of commercial space transportation operations increases, AST's role in regulating the industry will evolve.

- *Cybersecurity:* As aviation has evolved and newer technologies have been adopted and integrated, cybersecurity concerns have arisen. The *2016 FAA Extension* directed the FAA to implement a comprehensive strategic framework for aviation cybersecurity.

FAA and ATC Reform

On May 17, 2017, the Committee held a hearing entitled, "The Need to Reform FAA and Air Traffic Control to Build a 21st Century Aviation System for America." The Summary of

[16] Federal Aviation Administration, "Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap", p. 4 https://www.faa.gov/uas/media/UAS_Roadmap_2013.pdf
[17] *Id*. at 6

Subject Matter and witnesses' testimony for the hearing addressed the current state of ATC, ATC modernization efforts, and the need for transformational reform of the FAA.

Status Quo is Unacceptable

While the FAA's day-to-day operation of the ATC system is safe, the Agency has struggled to keep up with increasing demand and technological advances. To ostensibly prepare for forecasted growth, the FAA has been working for decades to modernize the ATC system, which is predominantly based on outdated technologies and procedures that are inadequate to support a modern aviation industry. Without modernization, controllers and aircraft operators have been forced to use the airspace in very inefficient ways. These inefficiencies manifest themselves in a number of ways including increased flight times, fuel consumption, and emissions. The long-term success of American aviation requires, among other things, ATC services capable of meeting the dynamic needs of diverse airspace users and the timely and cost-effective deployment of innovative technologies.

Decades of Department of Transportation Inspector General (DOT IG) audits, Government Accountability Office (GAO) reports, and third party reviews have documented the extraordinary waste of tax dollars and poor management of a string of FAA "modernization" programs dating back to the early 1980s. The FAA began its latest ATC modernization initiative, the Next Generation Air Transportation System (NextGen), in 2003.[18] From the beginning, the FAA marketed NextGen as fundamentally transforming how air traffic would be managed.[19]

However, according to government watchdog reports, the FAA's 20-year, $40 billion "NextGen" initiative has been plagued by cost and schedule overruns and has produced only incremental improvements in capacity and safety. For instance, in 2012, the GAO found that "…FAA's organization…has been slow to embrace NextGen's transformational vision... [and] [g]aps in leadership have further undermined the Agency's efforts to advance NextGen."[20] A 2014 GAO report found that aviation stakeholders lack confidence in FAA's ability to implement ATC modernization.[21] Regarding FAA's NextGen effort, in 2014 the DOT IG testified that "[w]e are probably looking years beyond 2025, perhaps another 10 even, and we are probably also looking at the total expenditures in an order of magnitude two to three times that of the initial $40 billion estimate to achieve the original plan."[22] The DOT IG recently reaffirmed

[18] https://www.faa.gov/nextgen/

[19] Various descriptions of NextGen over the years have included: in 2004, a "Transformation of America's air transportation network"; in 2006, an "Aviation Revolution"; in 2009, "…will forever redefine how we manage our national airspace system"; in 2011, "…a comprehensive overhaul of our national airspace system…."; in 2013, "…an evolution from a ground-based system of air traffic control to a satellite-based system of air traffic management"; in 2014, "a widespread, transformative change in the management and operation of the way we fly"; in 2015, "…a new era of aviation"; and in 2016, "NextGen is now."

[20] U.S. Government Accountability Office, *Air Traffic Control Modernization: Management Challenges Associated with Program Costs and Schedules Could Hinder NextGen Implementation*, February 2012, GAO-12-223, p. 3.

[21] U.S. Government Accountability Office, *Air Traffic Control System: Selected Stakeholders' Perspectives on Operations, Modernization, and Structure*, GAO-14-770, p. 11 (Sept. 2014).

[22] Testimony of Calvin Scovel, Inspector General, U.S. Department of Transportation, Subcommittee on Aviation, Committee on Transportation and Infrastructure, hearing on FAA Reauthorization: Issues in Modernizing and Operating the Nation's Airspace" (November 18, 2014); see also Testimony of Calvin Scovel, Inspector General,

his assessment that risks and uncertainties surrounding NextGen could result in delayed implementation through 2035 and a doubling or tripling of the initial $40 billion cost figure.[23]

It is not even clear to the independent watchdogs exactly what NextGen entails, how much it costs, and what benefits will ever be delivered. Both the National Research Council and the DOT IG have pointed out that instead of fundamentally changing how air traffic is managed, as initially promised, the FAA's NextGen effort has shifted to replacing and updating decades-old equipment and systems.[24] In other words, NextGen has largely become the ordinary business of replacing old equipment. While that is a basic necessity for any enterprise, the transformational benefits FAA promised are unlikely to be realized from NextGen programs as they exist today. The limited NextGen benefits that passengers and aircraft operators have seen are certainly not in line with taxpayer dollars invested, which is approximately $7.5 billion to date.[25]

Targeted FAA Reforms

Some are proposing that additional, targeted reforms to the FAA's personnel and procurement processes, and changing its budgetary treatment is all that is required to address the FAA's chronic problems with the ATC system and modernization efforts. But, these targeted reforms have been tried before. Since 1995, Congress has granted the FAA unique authorities through personnel, procurement, and structural reforms to allow the FAA to run "more like a business". However, previous reform efforts have been widely unsuccessful.

The DOT IG assessed the impact of FAA reforms since 1995 and concluded, "…these efforts have not achieved anticipated cost savings and operational efficiencies."[26] Regarding personnel reform, the DOT IG found that "…while Congress exempted FAA from most Title 5 laws and regulations, FAA has not leveraged these personnel reform flexibilities…. According to a senior FAA Human Resources official, the only difference between FAA's personnel system and the rest of the Federal Government's is compensation."[27] The DOT IG did find that the FAA had implemented systems to operate more like a business, however the DOT IG concluded, "… [FAA] does not regularly analyze the operational and cost data generated by these systems to

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U.S. Department of Transportation, Committee on Transportation and Infrastructure, hearing on "The Need to Reform FAA and Air Traffic Control to Build a 21st Century Aviation System for America" (May 17, 2017).

[23] Testimony of Calvin Scovel, Inspector General, U.S. Department of Transportation, Committee on Transportation and Infrastructure, hearing on "The Need to Reform FAA and Air Traffic Control to Build a 21st Century Aviation System for America" (May 17, 2017).

[24] National Research Council, *A Review of the Next Generation Air Transportation System: Implications and Importance of System Architecture*, p. 3, The National Academies Press (2015); and Department of Transportation Office of the Inspector General, *Total Costs, Schedules, and Benefits of FAA's NextGen Transformational Programs Remain Uncertain*, AV-2017-009, p. 17 (Nov. 2016).

[25] U.S. Government Accountability Office, *Next Generation Air Transportation System: Information on Expenditures, Schedule, and Cost Estimates, Fiscal Years 2004 – 2030*, GAO-17-241R, p.2 (Nov. 2016).

[26] Testimony of Calvin Scovel, Inspector General, U.S. Department of Transportation, Committee on Transportation and Infrastructure, hearing on "The Need to Reform FAA and Air Traffic Control to Build a 21st Century Aviation System for America" (May 17, 2017).

[27] Department of Transportation Office of the Inspector General, *FAA Reforms Have Not Achieved Expected Cost, Efficiency, and Modernization Outcomes*, AV-2016-015, p. 9 (Jan. 2016).

determine if it could reduce costs or improve productivity."[28] Finally, according to the DOT IG, the FAA's acquisition reform has not accelerated delivery of new technologies nor reduced costs or schedules, as was anticipated with the transition to the current acquisition management system (AMS).[29]

Suggestions that the FAA should be given greater budgetary and procurement flexibilities would require Congress to cede any meaningful oversight and management of NextGen programs to the very agency that has repeatedly failed to deliver on NextGen and other modernization programs' promises since the early 1980s. Moreover, any new budgetary flexibilities and authorities would remain tethered to the annual appropriations cycle, making them subject to the same volatilities inherent in the current cycle of political dysfunction.

ATC Reform

The FAA-operated ATC services is adequately functional and safe on a day-to-day basis, but is plagued by inherent conflicts-of-interest, wastefulness, inefficiency, and long-term financing difficulties. The FAA has been continuously "modernizing" since 1981, yet there is no evidence that the current modernization program differs from the preceding decades of programs that overpromised and under-delivered at great cost. Today, over 60 countries have successfully separated their ATC service provider from their government safety regulator. The United States is one of a handful of industrialized countries that has yet to do so. The results of separating ATC have been quite positive according to multiple audits and studies over the years.[30]

Last Congress, the Committee on Transportation and Infrastructure proposed separating the provision of air traffic services from the safety regulator. The Committee is considering similar reforms to the FAA this year.

President's Budget and ATC Reform

The President's fiscal year 2018 budget includes reforms that would shift the FAA's air traffic control function to an independent, non-governmental organization beginning in 2021. The budget states that despite its excellent safety record, the FAA "…is challenged increasingly to address the quickly evolving needs of the Nation's airspace users."[31] The Administration states, "[t]his transformative undertaking will create an innovative corporation that can more nimbly respond to the demand for air traffic services, all while reducing taxes and Government spending.

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[28] Id. at 10.
[29] Testimony of Calvin Scovel, Inspector General, U.S. Department of Transportation, Committee on Transportation and Infrastructure, hearing on "The Need to Reform FAA and Air Traffic Control to Build a 21st Century Aviation System for America" (May 17, 2017).
[30] See U.S. Government Accountability Office, "Air Traffic Control: Characteristics and Performance of Selected International Air Navigation Service Providers and Lessons Learned from Their Commercialization," GAO-05-769, p. 4, (Jul. 2005); Glen McDougall and Alasdair Roberts, "Commercializing Air Traffic Control: Have the reforms worked?" *Canadian Public Administration*, Vol. 51, No. 1, pgs. 45-69, (Mar. 2008); and Dan Brown, Tom Berry, Steve Welman, and E.J. Spear, "CAA International Structures", MITRE Product, MP140527, (Oct. 2014).
[31] *Budget of the United States Government, Fiscal Year 2018: A New Foundation For American Greatness*, p. 19 (May 2017), https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/budget.pdf

The parts of FAA that will remain with the Government will retain important aviation safety regulatory activities as well as maintain AIP grant program."[32]

The proposal in the President's budget calls for reducing aviation passenger taxes and allowing the new entity to set and collect user fees based on their use of the Nation's airspace. It is not clear which taxes would be eliminated, but the budget does note that there would be "…a cap reduction in discretionary spending of $72.8 billion, and reduction in aviation excise taxes of $115.6 billion."[33]

WITNESS LIST

The Honorable Elaine Chao
Secretary of Transportation
U.S. Department of Transportation

[32] Id.
[33] Id.