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

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SUMMARY OF SUBJECT MATTER

TO: Members, Subcommittee on Aviation
FROM: Staff, Subcommittee on Aviation
RE: Subcommittee Hearing on "Federal Aviation Administration Reauthorization: Enabling a 21st Century Aviation System"

PURPOSE

The Subcommittee on Aviation will meet on Tuesday, March 3, at 9:30 a.m. in 2167 Rayburn House Office Building to hear testimony on issues related to the Federal Aviation Administration (FAA) and Federal aviation programs with a view toward reauthorizing the programs before they expire on September 30, 2015. The Subcommittee will hear testimony from the FAA Administrator, the sole witness.

BACKGROUND

The last multi-year FAA reauthorization, the *FAA Modernization and Reform Act of 2012* (P.L. 112-95), was signed into law on February 14, 2012, and covered fiscal years 2011-15. Prior to the law's enactment, the FAA was funded through a series of 23 short-term extensions. The absence of a long-term reauthorization created difficulties for the agency and industry in long-term planning for investments in the aviation system.

The aviation industry is a crucial sector of the United States economy. Commercial aviation is responsible for roughly five percent of our gross domestic product and contributes roughly eleven million American jobs to our economy.[1] The aviation industry is comprised of a variety of different sectors, commercial aviation, airports, general aviation, and manufacturing. These sectors within the aviation industry are dependent upon a safe, efficient, and modern air traffic control system; a well-maintained and vast airport network; innovative and robust manufacturing sector; and efficient, effective, and economical regulatory processes.

[1] FAA "The Economic Impact of Civil Aviation on the U.S. Economy." June 2014. Pg. 5

The United States has roughly 19,453 airports providing services to our aviation system, and in many communities they are key economic drivers.[2] U.S. commercial airports support roughly 9.6 million jobs and produce an annual output of $1.1 trillion.[3]

In 2014, general aviation (GA) in the United States had a total economic output of $219 billion and supported roughly 1.1 million jobs.[4] GA represents a broad range of aviation activities, including business, recreation, agriculture, law enforcement, air ambulance operations, and disaster relief.[5]

Commercial aviation is a major component of the U.S. economy, driving 11.3 million U.S. jobs, nearly $1.5 trillion annually in economic activity, and 5.1 percent of U.S. gross domestic product.[6] The 2014 FAA forecast predicts U.S. carrier passenger growth over the next 20 years to average 2.2 percent per year, unchanged from 2013's forecast. If these forecasts hold true the modernization of our air traffic control system, through a set of programs to develop the Next Generation Air Transportation System (NextGen), is critically important to ensure system capacity meets demand.

In 2012, civil aircraft manufacturing was a top net exporter, with a positive trade balance of $54.3 billion.[7] Since the end of the 2008 recession, real U.S. economic growth averaged 2.4 percent per year, but in the same time frame the real primary output of civil aviation grew an average of 3.9 percent a year.[8]

Aviation Funding.

The FAA's total enacted budget for fiscal year (FY) 2015 is roughly $15.8 billion; within that budget are four different accounts:

- Operations (roughly $9.7 billion);
- Facilities & Equipment ($2.6 billion);
- Research, Engineering, & Development ($157 million); and
- Grants-In-Aid for Airports ($3.35 billion).

These four accounts are funded through two different funds, the Airport and Airway Trust Fund (Trust Fund) and the General Fund of the Treasury. The Trust Fund was created in 1970 and is directly funded through revenues collected from a series of excise taxes paid by users of the

[2] Department of Transportation Bureau of Transportation Statistics. http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_01_03.html
[3] http://airportsforthefuture.org/files/2014/09/Economic-Impact-of-Commercial-Aviation-2013.pdf
[4] "General Aviation Statistical Databook & 2015 Industry Outlook." 2014. General Aviation Manufacturer's Association http://www.gama.aero/files/GAMA_2014_Databook_LRes%20-%20LowRes.pdf
[5] General aviation does not include scheduled commercial flights or military flights.
[6] Airlines for America. "Industry." http://airlines.org/industry/
[7] FAA "The Economic Impact of Civil Aviation on the U.S. Economy." June 2014. Pg. 5
[8] FAA "The Economic Impact of Civil Aviation on the U.S. Economy." June 2014. Pg. 5

national airspace system:[9]

- 7.5 percent passenger ticket tax;
- $4.00 passenger flight segment fee (does not apply to passengers departing from a rural airport, defined as those that have less than 100,000 passengers per year);
- 6.25 percent freight waybill tax;
- $17.70 international departure and arrival taxes;
- 7.5 percent frequent flyer award tax;
- $8.90 Alaska and Hawaii international air facilities tax; and
- Aviation fuel taxes as follows:

    - 4.3 cents on commercial aviation;
    - 19.3 cents on general aviation gasoline; and
    - 21.8 cents on general aviation jet fuel.

According to the U.S. Treasury Department, these taxes raised about $13.5 billion in FY 2014, including the following amounts:

- $9.3 billion from the passenger ticket taxes;
- $465 million from the freight waybill tax;
- $353 million from the commercial aviation fuel taxes;
- $210 million from general aviation taxes; and
- $3.2 billion from the international departure and arrival taxes.

The Trust Fund continues to earn interest on its cash balance, which was $14.2 billion at the end of FY 2014.

Airport Financing.

In the 2015-2019 National Plan of Integrated Airport Systems (NPIAS), the FAA projects grant-eligible airport development needs will total $33.5 billion over the next five years; averaging $6.7 billion per year.[10]

To finance daily operations, airports generate and rely on both aeronautical and non-aeronautical revenue. The primary source of aeronautical (or airside) revenue is derived from fees that airlines pay for the use and maintenance of the airport facilities, including terminal rents, landing fees, and other airport services (i.e., use of a jet bridge). [11] Non-aeronautical (or terminal and landside) revenue includes those funds generated through things such as concessions, parking and airport access, rental car operations, and land rent.[12]

[9] This list includes only those taxes that are deposited into the Trust Fund, not other fees such as the $2.50 security fee on aviation users.
[10] FAA. "Report to Congress National Plan of Integrated Airport Systems."
http://www.faa.gov/airports/planning_capacity/npias/reports/media/npias-2015-2019-report-narrative.pdf
[11] Airports Council International-North America, Primer: Airport Financing
[12] *Id.*

To finance capital needs, airports use a combination of federal grant funding (through the Airport Improvement Program (AIP)), passenger facility charges (PFCs), tax-exempt bonds (often secured by airport revenue or PFCs), state and local grants, and airport revenues.

AIP provides grants to public agencies — and, in some cases, to private owners and entities — for the planning and development of public-use airports that are included in the NPIAS.[13] AIP is funded entirely by the Trust Fund. In addition to the AIP, the Trust Fund also fully funds the FAA's air traffic control facilities and equipment (F&E) modernization program and its aviation research program. The Trust Fund also partially pays for the salaries, expenses and operations of the FAA.

As of 2013, there were approximately 19,453 airports in the United States.[14] Of those, 542 served air-carrier operations with aircraft seating more than nine passengers and 19,191 were general aviation airports.[15] There were 3,345 public-use airports (3,331 existing and 14 proposed) identified in FY 2015. Public-use airports included in the NPIAS are eligible for AIP grants.

Entitlements.

The law divides AIP funding into two broad categories: entitlement funds and discretionary funds. Entitlement funds are further divided into four sub-categories. They are --

- Primary airport entitlements;
- Cargo airport entitlements;
- State and general aviation entitlements; and
- Alaskan airport entitlements.

Discretionary.

Any money left over after the above entitlements are funded can be spent by the FAA at its own discretion. However, this discretionary funding is subject to three set-asides; noise, military airports and reliever airports. For noise set-aside, the law sets aside 35 percent of discretionary funds for noise projects. These projects could include such things as buying property for a noise buffer or soundproofing buildings. Under the military airport program (MAP), a total of 15 airports may participate in the program at any one time, including one general aviation airport. Airports may be selected or reselected to receive financial assistance for up to five years. Reliever airports are high-capacity GA airports intended to provide GA pilots with alternative airports to congest hub airports. These airports have a set-aside of two thirds of one percent of discretionary funding.[16]

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[13] FAA. "Overview: What is AIP?" https://www.faa.gov/airports/aip/overview/

[14] Bureau of Transportation Statistics. "Table 1-3: Number of U.S. Airports" http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_01_03.html

[15] Id.

[16] Congressional Research Service. "Issues in the Reauthorization of the Federal Aviation Administration (FAA)."January 29, 2015.

Pure discretionary.

After the entitlements and set-asides are funded, the remaining money can be spent as the FAA sees fit. This is often referred to as pure discretionary AIP money. However, there are some restrictions on pure discretionary funds. The law requires that 75 percent of the available discretionary money in a fiscal year be spent on airport projects that will enhance capacity, safety, or security, or reduce noise.[17]

PASSENGER FACILITY CHARGE

In addition to AIP grants, airports are allowed to levy a passenger facility charge (PFC). PFCs are a local charge, with Federal approval, collected by the airlines and paid directly to the airport without going through the Federal Treasury. They are intended to supplement AIP by providing more money for runways, taxiways, terminals, gates, and other airport improvements.[18] Currently, no airport may charge a PFC of more than $4.50 per passenger and PFCs are capped at $18 for any travel itinerary. No airport can charge a PFC until FAA approves it.

FAA has approved PFCs at 389 airports, of which 360 are currently collecting charges. The total approved collections are over $90 billion. In calendar year (CY) 2013, $2.81 billion was collected and $2.87 billion is expected to be collected in CY 2015.

FACILITIES AND EQUIPMENT

FAA applies F&E funds to purchase and install radar, computers, navigation aids, and other equipment that air traffic controllers use to guide planes through the air safely and efficiently. F&E funds are also used to sustain existing facilities and equipment.

NextGen

Beginning in the early 1980s, the FAA started its effort to modernize the air traffic control system. While this effort has existed through a number of programs, in 2004 Congress first authorized the current iteration of the NextGen modernization effort. NextGen is a $40 billion program initially slated to be completed by 2025 to transition the Nation's airspace from a 1950s radar-based system to advanced-technology air-traffic management.[19] In 2003, NextGen was envisioned as a fundamental reengineering of our Nation's airspace to reduce congestion and delays, increase capacity, while further improving safety and reducing aviation's environmental footprint. NextGen currently comprises several major programs, including, En-Route Automation Modernization (ERAM), Data Communications (DataComm), Automatic

[18] Congressional Research Service. "Issues in the Reauthorization of the Federal Aviation Administration (FAA)."January 29, 2015.

[19]Statement of Matthew E. Hampton, U.S. Department of Transportation Inspector General before the Committee on Commerce, Science, and Transportation, Subcommittee on Aviation Operations, Safety, and Security United States. "Progress and Challenges in Meeting Expectations for NextGen." June 25, 2014. Pg. 3

Dependent Surveillance-Broadcast (ADS-B), and Terminal Automation Modernization and Replacement (TAMR).[20] These programs, along with other NextGen programs, are intended to improve the efficiency of the Nation's airspace by permitting aircraft to avoid congestion-related delays, fly more direct routes, and ultimately fly more closely spaced together by virtue of improved air traffic control surveillance technology.

As with previous air traffic control modernization efforts, concerns have been raised regarding FAA's implementation of NextGen technology and procedures. In 2013, the Department of Transportation Inspector General (DOT IG) found that "longstanding programmatic and organization challenges…. further undermine NextGen's progress." In addition, the DOT IG stated that the FAA's NextGen plans were "overly ambitious" and that the FAA has "yet to develop an executable implementation plan that addresses costs and technology development and integration."[21] In September 2014, the Government Accountability Office (GAO) reported that, of the 76 industry and labor stakeholders interviewed about challenges associated with the ATC system, 71 characterized the system as "very" to "extremely" safe.[22] GAO also found, when interviewing stakeholders regarding FAA's capability in overall NextGen implementation, that three times as many stakeholders said implementation "was not going well" compared to those who did. [23]

Safety

The U.S. commercial aviation system has an impressive safety record. This safety record is the result of the hard work and dedication of all aviation stakeholders. The *FAA Modernization and Reform Act of 2012* contained a number of provisions to improve aviation safety, including provisions addressing aviation worker training, FAA facility staffing, and expeditious certification of new safety-enhancing technologies. Additionally, in 2010, Congress passed the *Airline Safety and Federal Aviation Administration Extension Act of 2010* (P.L. 111-216), which contained a number of provisions to address safety concerns raised in the wake of the accident of Colgan flight 3407 near Buffalo in 2009. The safety bill, among other things, directed the FAA to finalize regulations to reduce pilot fatigue and to improve airline pilot training and minimum qualifications. The FAA has implemented many of these provisions, but has yet to complete work on the bill's requirement for a centralized database of pilot records, among other things.

Unmanned Aircraft Systems.

In the past decade, interest in operating unmanned aircraft systems in the United States domestic airspace has increased. In the *FAA Modernization and Reform Act of 2012* (P.L. 112-95), Congress directed the FAA to take certain steps to facilitate the safe integration of unmanned aircraft systems (UAS) into the national airspace no later than September 30, 2015. This included a requirement for the FAA to develop a final rule for small UAS by August 2014; FAA issued a

[20] Federal Aviation Administration. "NextGen Implementation Plan," August 2014.
[21] Inspector General of the Department of Transportation. "Addressing Underlying Causes for NextGen Delays Will Require Sustained FAA Leadership and Action" AV-2014-031. February 25, 2014. Pg. 2.
[22] Gov't Accountability Office, *Air Traffic Control System: Selected Stakeholders' Perspectives on Operations, Modernization, and Structure*, Rpt. No. GAO-14-770, at 38 (2014).
[23] *Id*. at 39.

proposed small UAS rule on February 15, 2015.[24] The Act also directed the FAA to establish "a program to integrate unmanned aircraft systems into the national airspace system at 6 test ranges."[25] The test ranges were selected in December 2013; all six are now operational. In addition, FAA was instructed to develop a comprehensive plan to safely accelerate the integration of unmanned aircraft systems in the United States airspace. The FAA released this comprehensive plan on November 6, 2013.

Section 333 of the *FAA Modernization and Reform Act of 2012* grants the Secretary of Transportation the authority to determine whether certain UAS can operate in the National Airspace System under exemption from the general requirement for a certificate of waiver, certificate of authorization, or airworthiness certification because they present low risk to people and property in the air and on the ground. To date, FAA has received over 400 permit applications under section 333. Of those, just over 30 have been granted. In addition, FAA has issued 173 experimental certificates (original & recurrent) for UAS operations.

A June 2014, the DOT IG raised concerns with FAA's progress in implementing the UAS provisions in the *FAA Modernization and Reform Act of 2012*.[26] The DOT IG reported that the FAA "is behind schedule on most of the Act's UAS provisions, and the magnitude of unresolved safety and privacy issues will prevent FAA from meeting Congress' September 2015 deadline for UAS integration."[27] In addition the DOT IG noted that the FAA has not developed an "adequate framework for sharing and analyzing UAS safety data" and that the existence of "organizational barriers" is impeding the agency's progress toward the integration and oversight of UAS.[28] The DOT IG also indicated that while the FAA has begun to authorize certain UAS operations, the FAA "has not developed the procedures, training, and tools for controllers to effectively manage UAS in the same airspace as other aircraft.[29] Finally, the DOT IG reported that technological barriers remain with "detect and avoid" and "lost link capabilities" however research within several government agencies on these issues is ongoing.[30]

Certification and Regulatory Reform.

The FAA is responsible for issuing design and manufacturing approvals for aircraft, aircraft engines and propellers, as well as aircraft parts and appliances (aircraft and aircraft components). To ensure the safety of an aircraft and aircraft components, the FAA has developed a set of safety standards for aircraft and aircraft components. The Flight Standards Service sets the standards for certification and oversight of airmen, air operators, air agencies, and designees.[31] It conducts certifications, inspections, surveillance, investigations, enforcement actions, and manages the system for registration of civil aircraft and all airmen records. In

[24] *FAA Modernization and Reform Act of 2012.* (P.L. 112-95) Section. 332. And. FAA . "Press Release: DOT and FAA Propose New Rules for Small Unmanned Aircraft Systems." February 15, 2015.
[25] *FAA Modernization and Reform Act of 2012.* (P.L. 112-95) Section. 332.
[26] Department of Transportation Inspector General. "FAA Faces Significant Barriers To Safely Integrate Unmanned Aircraft Systems Into the National Airspace System." June 26, 2014.
[27] Id.
[28] Id. at 11-12.
[29] Id. at 9.
[30] Id. at 6.
[31] http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/

response to stakeholder concerns related to certification delays and inconsistent regulatory interpretation of certification standards and processes, the *FAA Modernization and Reform Act of 2012* contained two provisions. The first provision, section 312, required the FAA to develop a plan to streamline certification processes. The second provision, section 313, directed the FAA to develop and implement a plan to address inconsistencies in regulatory interpretation in certification. In response to Aviation Rulemaking Committee recommendations, the FAA issued the first version of its implementation plan for section 312 in January 2013. The FAA has since released periodic updates of this plan. Section 313's implementation plan was released on January 20, 2015.

FAA Consolidation and Realignment of FAA Facilities

Many FAA air traffic control facilities are 30 to 50 years old.[32] The agency will realize cost savings from consolidating many of these facilities.[33] The *FAA Modernization and Reform Act of 2012* required the FAA to submit a report to Congress with recommendations on the realignment and consolidation of FAA services and facilities; this report has yet to be submitted to Congress.

WITNESS LIST

The Honorable Michael Huerta
Administrator
Federal Aviation Administration

[32] Statement of Bruce Johnson, Vice President of Terminal Services before the Committee on Transportation and Infrastructure, Subcommittee on Aviation, on FAA's Aging ATC Facilities: Investigating the Need to Improve Facilities and Worker Conditions, July 24, 2007.

[33] Statement of The Honorable Calvin L. Scovel III Inspector General U.S. Department of Transportation, before the Committee on Transportation and Infrastructure, Subcommittee on Aviation, on Challenges in Meeting FAA's Long-Term Goals for the Next Generation Air Transportation System, page 5, April 21, 2010