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

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DEMOCRATIC SUMMARY OF SUBJECT MATTER

TO: **Democratic Members, Committee on Transportation and Infrastructure**
FROM: **Democratic Staff, Subcommittee on Aviation**
RE: **Full Committee Markup of H.R. 2997**

The Committee on Transportation and Infrastructure will meet in open session on Tuesday, June 27, 2017, at 10:00 a.m., in room 2167 of the Rayburn House Office Building to mark up H.R. 2997, the "21st Century Aviation Innovation, Reform, and Reauthorization (AIRR) Act".

A significant portion of the Federal Aviation Administration (FAA) reauthorization bill is the product of bipartisan negotiations that began in the last Congress. The bill provides funding for the Airport Improvement Program (AIP) for airport infrastructure investments, significantly reforms the FAA's aircraft and equipment certification process as aviation manufacturers have requested, and advances the integration of unmanned aircraft systems (UAS) while addressing safety issues related to the nascent industry.

However, the bill falls short in several areas, and Ranking Member DeFazio intends to strongly oppose it. For example, it:

- **Privatizes** the U.S. air traffic control system, fracturing the FAA, likely driving up the cost of air travel, and compromising the FAA's ability to run its remaining programs;
- **Fails** to restore authority to the Department of Transportation (DOT) to protect the flying public from the known risks of lithium batteries in air transportation; and
- **Underinvests** in the Nation's airports by failing to eliminate or raise the Federal cap on the passenger facility charge (PFC).

This memo provides background on the bill, organized in the following sections:

I. **Funding**
II. **Air traffic control privatization**
III. **Airports**
IV. **Certification process reform**
V. **Safety**
VI. **Unmanned aircraft integration**
VII. **Passenger air service improvements**
VIII. **Miscellaneous provisions**

I. FUNDING

Funding for the FAA's aviation programs comes from four accounts, shown in table 1.

Table 1: FAA accounts and funding sources

Account	Description
Operations	Covers operation of the ATC system, aviation safety regulation and oversight, operation and maintenance of FAA facilities and equipment, and agency-wide administrative and operational activities.
Facilities and Equipment	Covers FAA acquisitions of facilities and equipment necessary to operate the ATC system, including ATC modernization, and fulfill the agency's other mandates.
Research, Engineering, and Development	Covers research and development costs associated with improving FAA infrastructure and modernizing the aviation system.
Grants in Aid for Airports	Covers grants to airport sponsors for airport improvements under the Airport Improvement Program.

Revenue from aviation taxes deposited into the Airport and Airway Trust Fund provides the majority of FAA program funding; a small remainder is appropriated from the General Fund of the Treasury. The Congressional Budget Office (CBO) January 2017 baseline projects that, in fiscal year (FY) 2018, the General Fund will contribute just 11.7 percent of total program funding, down from 20-plus percent over the last decade. **Furthermore, according to the CBO baseline, Trust Fund receipts plus interest are projected to cover more than 102 percent of all aviation program funding needs for the next 10 years.**

Table 2: Proposed funding levels under H.R. 2997

Dollars in thousands

FAA continues intact				Air traffic control system privatized		
Account	FY 2018	FY 2019	FY 2020	FY 2021*	FY 2022*	FY 2023*
FAA Operations	$10,132,000	10,349,000	10,571,000	1,957,000	2,002,000	2,047,000
Facilities and Equipment	$2,920,000	2,984,000	3,049,000	189,000	193,000	198,000
Airport Improvement Program	$3,424,000	3,499,000	3,576,000	3,655,000	3,735,000	3,817,000
TOTAL	**$16,476,000**	**16,832,000**	**17,196,000**	**5,801,000**	**5,930,000**	**6,062,000**

*All FY 2021 - 2023 funding comes from the General Fund, except that AIP remains under the Trust Fund.

Beginning in FY 2021, H.R. 2997 dramatically reconfigures the FAA's accounts by transferring the ATC system to a private corporation. Most of the FAA's Operations and Facilities and Equipment accounts are transferred to the new corporation, but the Airport Improvement Program remains with the FAA. The House Committee on Science, Space, and Technology has jurisdiction over Research, Engineering, and Development funding levels and has not yet released those proposed levels.

II. AIR TRAFFIC CONTROL PRIVATIZATION

Title II of H.R. 2997 contains a controversial plan to privatize the Nation's air traffic control system, which the FAA and its predecessor agencies have operated since the system's inception. Appendix 1 highlights key characteristics of the private ATC Corporation in H.R. 2997 and the one in last year's FAA reauthorization bill. **Most aviation stakeholders have expressed opposition to the Republican privatization plan.**

Proponents of privatization say it is necessary to insulate the air traffic control system from funding instability and to free the system of the FAA's bureaucratic procurement and personnel management systems. **At the markup, Ranking Member DeFazio will offer an amendment to strike title II of the bill and provide targeted FAA reforms that address each of the problems identified by stakeholders without creating the costly constitutional, logistical, and policy problems that will result from privatization. These targeted FAA reforms were introduced earlier this month as H.R. 2800, the "Aviation Funding Stability Act", which all Committee Democrats cosponsored at introduction and which has received the support of the National Air Traffic Controllers Association (NATCA) and the Professional Aviation Safety Specialists (PASS). No stakeholder has expressed opposition to H.R. 2800.**

III. AIRPORTS

Airport infrastructure needs have long exceeded the amount of Federal funding available. The FAA's National Plan of Integrated Airport Systems (NPIAS) registers $32.5 billion in AIP-eligible projects (or $6.5 billion annually) for the 2017 - 2021 time period. This annual need is nearly twice the amount authorized for the AIP program. In addition, the U.S. airport industry's capital needs survey records a total of $100 billion over the same period (or $20 billion annually) for AIP and non-AIP projects.

Despite these overwhelming investment needs, the 21st Century AIRR Act **fails to adjust the statutory Federal cap on the passenger facility charge (PFC), which, despite airport requests, remains static at $4.50 and has not been increased since 2000.** While the authorization for the Federal airport grant program is slightly increased over the six-year term of the bill, it is less than the funding provided in last year's Committee-approved bill and the legislation does not adequately address airport infrastructure needs.

On the other hand, the bill streamlines the PFC application process. The bill expands the pilot program that streamlines the PFC application process for non-hub airports to small, medium, and large hubs, which will expedite the application process. The bill also removes the "significant contribution" test for medium and large hubs applying for authorization to collect a $4 or $4.50 PFC. Eliminating this test will reduce application time, while protections remain to ensure that PFCs are spent on important projects regarding safety, security, noise, or capacity.

H.R. 2997 also:

- protects the Disadvantaged Business Enterprise program to improve airport contracting opportunities for small, minority- and women-owned businesses;
- requires medium and large hub airports to create private space for nursing mothers in each passenger terminal and expands AIP eligibility to include these projects;
- directs DOT to work with appropriate Federal agencies to ensure that critical habitat designations do not constrain airport development necessary to improve safety; and
- restores non-primary entitlement funding to airports deemed unclassified in the NPIAS.

IV. CERTIFICATION PROCESS REFORM

The FAA Modernization and Reform Act of 2012 (P.L. 112-95) directed the FAA to work with government and industry stakeholders to (1) assess the FAA's certification approval processes and develop recommendations to streamline and improve efficiency; and (2) determine the root causes of inconsistent regulatory interpretations and develop recommendations to improve consistency in interpretations.[1] H.R. 2997 implements the government and industry recommendations that resulted from work under these two mandates from the 2012 FAA reauthorization act.

In General. H.R. 2997 streamlines aircraft and flight standards certification processes, encourages full utilization of delegation authorities, implements a safety-systems approach, and encourages risk-based oversight efforts. The bill also improves workforce training for FAA aviation safety inspectors and safety engineers.

Safety Oversight and Certification Advisory Committee. The bill establishes a Safety Oversight and Certification Advisory Committee to advise the Secretary of Transportation on policy-level issues related to FAA safety certification and oversight programs, including efforts to streamline aircraft and flight standards certification processes, utilization of delegation authorities, risk-based oversight efforts and training programs. The Committee will establish national goals and priorities to improve the processes, provide policy reviews of FAA's work, make regulatory or legislative recommendations, establish performance metrics and goals, and develop training and continuing education objectives for FAA engineers and safety inspectors.

Aircraft Certification Reform. The bill directs the FAA to establish performance objectives and apply and track Transportation and Infrastructure Committee-developed metrics related to aircraft certification to eliminate delays, increase accountability for FAA and industry, achieve full utilization of existing delegation authority, and maintain U.S. leadership in aerospace. The certification title calls for greater utilization of existing organization designation authorizations (ODAs), which permit manufacturers with FAA approval to certify that well-understood designs comply with applicable requirements, so that the FAA can focus on high-risk and new and novel areas. The bill also creates a certification resolution process, which automatically elevates any major

[1] *Federal Aviation Administration Modernization and Reform Act of 2012,* P.L. 112-95, §§ 312-13 (2012).

milestone that is missed to upper management, and it streamlines the process for installation of safety-enhancing technologies for small general aviation airplanes.

Flight Standards Reform. The certification title also creates a task force to identify best practices to simplify and streamline the regulatory process of the FAA's Flight Standards Service, which conducts the agency's operational safety oversight of airlines, other aircraft operators, pilots, and other FAA certificate-holders. The bill directs the agency to reorganize the Flight Standards Service by function rather than geographic region and optimizes FAA safety inspector training opportunities. It establishes a centralized safety guidance database to improve transparency and decrease the opportunity for regulatory inconsistency. The section also creates a Regulatory Consistency Communications Board to establish a process by which FAA personnel and regulated entities may submit anonymous regulatory interpretation questions "without fear of retaliation".

Safety Workforce. This section directs FAA to establish a safety workforce training strategy to allow employees conducting ODA program audits to complete appropriate training, recurrent training, and seek knowledge-sharing opportunities (i.e., FAA and industry collaboration on new technologies). In addition, it requires the Government Accountability Office (GAO) to study current inspector qualifications, training and recurrent training requirements (including online training opportunities), current performance incentive policies and make recommendations to address these issues.

International Aviation. This section is designed to address the concerns from manufacturers that the FAA is no longer the "gold standard", and that as a result they experience long wait times abroad for foreign authorities to validate FAA-certificated products. The section directs the FAA to take action to promote U.S. aerospace standards abroad, facilitate and vigorously defend approvals of U.S. products and services abroad, and utilize bilateral safety agreements to improve validation of U.S. type certificate products to eliminate redundancies and unnecessary costs.

The bill improves the global competitiveness of U.S.-based aerospace manufacturers by:

- authorizing the FAA to collect fees for certification services from foreign governments that collect fees from U.S. companies for similar services; and

- providing the FAA with sole discretion over any international travel needed to promote U.S. aerospace safety standards or to support expedited acceptance of FAA certification efforts.

H.R. 2997 provides the FAA with new authority to defend its work abroad, by directing the agency to:

- work with U.S. companies that have experienced significantly long wait times in obtaining validations of FAA certifications by other countries' aviation safety regulators;

- work with U.S. companies to more accurately track the amount of time it takes foreign authorities and bilateral partners to validate FAA certifications;

- develop greater expertise in issues related to dispute resolution, intellectual property, and export control laws to better support certification and other regulatory activities abroad;

- work with foreign authorities and bilateral partners to collect and analyze data to determine the timeliness of foreign aviation authorities' acceptance and validation of FAA certifications and the acceptance and validation of foreign certifications by the FAA and to improve the timeliness of these processes; and

- develop appropriate benchmarks and metrics to measure the success of bilateral aviation safety agreements and to reduce the time for validations of U.S. type certificates abroad.

V. SAFETY

The bill reflects several Democratic priorities relating to aviation safety improvements. For example:

- **Flight Attendant Duty Period Limitations and Rest Requirements.** The FAA has not updated rules regarding the amount of time flight attendants can spend in flight and on duty since 1994. The bill enhances aviation safety by requiring a minimum rest requirement of 10 hours – instead of 8 hours – for flight attendants between duty periods, which will put flight attendants on par with pilots with regard to required rest between duty periods. The bill also requires each passenger air carrier to submit to the FAA a fatigue risk management plan for the carrier's flight attendants, which will ultimately minimize flight attendant fatigue.

- **Other Safety Enhancements.** In addition, the bill:

  - directs the FAA to establish an electronic learning training pilot program for FAA personnel that includes instruction on new aviation technologies and procedures and applicable FAA regulations;

  - requires the FAA to assess aircraft data access and retrieval systems for part 121 air carrier aircraft used in extended overwater operations;

  - directs the FAA to review certain display systems in cockpits to evaluate the impacts of these systems on the safety and efficiency of aircraft operations;

  - directs the FAA to examine current standards for cabin evacuations and requires it to re-evaluate the assumptions used for determining whether all passengers and crew can evacuate a new airplane design in 90 seconds with one-half of the exits blocked;

  - requires the FAA to evaluate, and to revise as appropriate, current regulations regarding emergency medical equipment, including contents of first-aid kids, on passenger aircraft;

  - requires the FAA to conduct a human intervention motivation study (occupation substance abuse treatment) program for commercial flight crewmembers; and

  - requires that airlines with aviation safety action programs automatically include employees' disclosures of operational or maintenance issues related to aviation safety in the databases used for trend analysis.

Despite these safety enhancements, however, the bill fails to advance safety in several key areas, including lithium batteries. FAA testing in 2015 established that just eight lithium-ion batteries at 50 percent charge in the cargo hold of a passenger airplane can and likely *will* bring down the aircraft. In a joint submission to the International Civil Aviation Organization (ICAO) Dangerous Goods Panel in April 2015, the world's largest airframe manufacturers cautioned that "existing cargo compartment fire protection systems . . . are unable to suppress or extinguish a fire involving significant quantities of lithium batteries . . . . Therefore, **continuing to allow the carriage of lithium batteries within today's transport category aircraft cargo compartments is an unacceptable risk to the air transport industry."** The manufacturers stated that current ICAO standards on lithium battery transportation "are not able to control or at least to contain a lithium battery fire within the required packaging."

Despite growing consensus that ICAO standards have not kept pace with our growing knowledge of the safety hazards of bulk shipments of lithium batteries in aircraft, the 2012 FAA reauthorization act included a Republican-backed prohibition on any U.S. rulemaking in excess of ICAO standards unless an accident has occurred.[2]

For some years, we have known that lithium batteries transported as cargo pose special risks to the safety of flight, but the FAA and other regulators are only now beginning to understand the extent and severity of these risks. When ignited, either through self-induced thermal runaway within a single cell or by an independent source, they burn at extremely high temperatures, and the resulting fire cannot be extinguished with traditional suppressants. UPS flight 006, a Boeing 747-400F laden with a cargo of lithium batteries, crashed in Dubai in 2010 after an in-flight fire propagated so quickly and generated such dense smoke that one pilot was incapacitated and the other lost the ability to see flight instruments and maintain controlled flight while maneuvering for an emergency landing. The next year, Asiana Cargo flight 991, also a Boeing 747-400F with a cargo of lithium batteries, crashed in the Korea Strait after the crew reported an in-flight fire. Recent FAA testing and other developments highlight the seriousness of the risks.

ICAO has finally begun to take action on the issue; last year the ICAO Council adopted the recommendation of the ICAO Air Navigation Commission to ban bulk shipments of lithium-ion batteries from passenger aircraft until airframe manufacturers and airlines can better understand and mitigate the risks. Additionally, the Council updated the guidelines relating to the state of charge of lithium batteries transported on cargo aircraft. Lithium ion cells and batteries must now be transported at a state of charge not exceeding 30 percent.[3] These are steps in the right direction, but they come almost six years after the UPS accident. If anything, last year's measures at ICAO merely validate the existence of a serious safety hazard and reinforce Democrats' argument that Congress's 2012 prohibition on U.S. rulemaking must be repealed so that the United States can retake its leadership role in aviation safety.

VI. UNMANNED AIRCRAFT INTEGRATION

Recent advancements in technology have made unmanned aircraft systems (UAS) affordable, easy to acquire and less complicated to operate. As a result, the proliferation of UAS in the United States has occurred at dramatic rates in the consumer markets. There is strong demand

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[2] *Id.* § 828.

[3] *See ICAO Dangerous Goods Programme—Addendums 3 & 4 to the Technical Instructions.*

for UAS for the private sector (real estate, bridge inspections, and agricultural surveillance), the public sector (law enforcement, wildfire mitigation) as well as recreational users. However, despite the tremendous potential for UAS, the FAA receives more than 100 reports of UAS sightings from pilots of manned aircraft, air traffic controllers, law enforcement, and others each month. As such, the 21st Century AIRR Act attempts to strike a balance between making serious strides to advance and integrate this new technology into the national airspace while preserving and clarifying the FAA's mandate to regulate the safety of all aircraft operations, manned or unmanned.

Integration. The bill requires the FAA to establish a **risk-based permitting process** that sets higher standards for those higher-risk UAS operations (e.g., near congested areas) and expedites the deployment of lower-risk UAS operations (e.g., in remote or isolated areas). FAA is required to expedite the review of any application for operations to be used for emergency preparedness, response, or disaster recovery efforts. The bill also reauthorizes and improves the **FAA-designated UAS test ranges.** It encourages testing of "sense and avoid" technologies, a critical step necessary to advance beyond-line-of-sight operations.

Safety. To maintain and improve the safety of unmanned aircraft operating in conjunction with manned aircraft, the bill includes a sense of Congress that (1) UAS operations near airports create serious hazards to aviation safety, (2) **Federal aviation regulations prohibit careless and reckless operations**, (3) the FAA, manufacturers and retailers should take steps to educate users about safe and lawful UAS operations, and (4) the FAA should pursue all civil and administrative remedies for unauthorized operations, including referrals for criminal investigations. The bill also amends the "special rule" for model UAS that was included in the 2012 FAA reauthorization act[4] so that the FAA has explicit authority to require the registration of model UAS in its drone registry, a tool that has become crucial in the agency's efforts to integrate UAS into our airspace.

Further, the bill:

- directs DOT, in consultation with appropriate federal agencies, to conduct a study to identify any degradation in individuals' **privacy** attributable to UAS integration;
- creates **parity for tribal governments** with state and local governments to operate UAS as "public aircraft" for law enforcement and emergency medical services;
- directs FAA to establish metrics to evaluate the levels of compliance of recreational UAS registration and requires the DOT Inspector General to assess the FAA's progress in tracking such metrics and the effectiveness of the registration system; and
- directs the DOT Inspector General to study the proper roles and responsibilities of Federal, state, local, and tribal governments in regulating low-altitude UAS operations.

[4] P.L. 112-95, § 336 ("Special Rule for Model Aircraft") (prohibiting the FAA from promulgating "any rule or regulation regarding a model aircraft . . . if the aircraft is flown strictly for hobby or recreational use").

VII. PASSENGER AIR SERVICE IMPROVEMENTS

Under current law, the DOT's Essential Air Service (EAS) program, which subsidizes airline service to rural communities, receives funding through two sources: (1) annual appropriations from the Airport and Airway Trust Fund, and (2) variable collections from overflight fees that the FAA charges to the operators of aircraft that transit U.S.-controlled airspace without taking off or landing in the United States. All funds are available until expended;[5] overflight-fee revenue is treated as mandatory spending.[6] **The bill appears to eliminate mandatory funding as a source of EAS funding and shifts all funding to appropriations from the Trust Fund.** It provides nominal increases to total EAS program funding.

EAS program funding
Dollars in millions

Source	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Trust Fund	$178	$182	$185	$327	$337	$347
Overflight fees	$119*	$119*	$119*	--	--	--

**Estimated figure.*

In total, 172 communities participated in the EAS program as of June 1, 2017, receiving subsidies totaling $297.9 million on an annual basis.

The bill's air service title includes the following provisions:

- prohibits the use of mobile devices for voice calls in flight;
- improves pre-purchase notification when booking a ticket for travel from the United States to a country that requires that aircraft cabins be treated with insecticide;
- makes it an unfair or deceptive practice for an air carrier to involuntarily deplane a confirmed and checked-in passenger after boarding the aircraft;
- clarifies that there is no maximum level of compensation an air carrier may pay to a passenger who is involuntarily denied boarding due to flight oversale;
- extends the term of the DOT advisory committee on air passenger rights;
- creates an advisory subcommittee that will identify disability-related access barriers encountered by passengers with disabilities and recommend improvements to DOT;

[5] 49 U.S.C. § 41742(c).
[6] *Id.* § 41742(b).

- requires the Architectural and Transportation Barriers Compliance Board, in consultation with the DOT, to conduct a study on in-cabin wheelchair restraint systems; and

- requires a GAO study reviewing airport accessibility, air carrier and airport training policies for properly assisting passengers, and accessibility best practices that exceed current laws and regulations.

VIII. MISCELLANEOUS PROVISIONS

Finally, the bill:

- requires the FAA to conduct a review on the effect of aircraft noise exposure on the communities around airports and report to Congress within two years; and

- directs DOT to carry out an environmental mitigation pilot program at up to six public-use airports aimed at mitigating aviation impacts on noise, air quality, or water quality within 5 miles of the airport.

The bill does not include provisions relating to further slot exemptions for airline service between Washington National Airport and points more than 1,250 miles away.

Amendments

We will provide additional information regarding amendments to the bill as it becomes available.

Subcommittee Staff Contact

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Appendix 1.

Private ATC Corporation	H.R. 2997 (2017)	H.R. 4441 (2016)
Board size	13	13
Board composition *(Note: In both bills, directors may not be employees of the ATC Corporation.)*	CEO	CEO
	2 appointed by Secretary	2 appointed by the Secretary to act in the public interest
	1 representing mainline carriers	4 representing mainline carriers
	1 representing cargo carriers	None
	1 representing regional carriers	None
	1 representing general aviation	2 representing general aviation
	1 representing business aviation	1 representing business aviation
	1 representing controllers	1 representing controllers
	1 representing pilot unions	1 representing pilot unions
	1 representing airports	None
	2 selected by other directors	None
	None	1 representing aviation manufacturers
Who pays user fees?	Passenger and cargo airlines	Passenger and cargo airlines and commercial general aviation operators (small-town charters)
Who is exempt from user fees?	Every aviation operator except a passenger or cargo airline	Recreational general aviation users; government and military users
User fee formula	No requirement, but favors ICAO weight-distance formula	No requirement, but favors ICAO weight-distance formula
Federal assets	Conveyed to private corporation for free	Conveyed to private corporation for free
Spectrum	Corporation must have access "spectrum systems"— i.e., radios— used by FAA along with data necessary to access	Corporation must have access "spectrum systems"— i.e., radios— used by FAA along with data necessary to access
Constitutional workaround	Complex procedure for Secretarial approval of airspace design changes (flight procedures, etc.) to avoid constitutional conflicts	Complex procedure for Secretarial approval of airspace design changes (flight procedures, etc.) to avoid constitutional conflicts
User fee appeals	Decided by Secretary	Decided by Secretary
Prohibition on workforce strikes	Explicit	Implied

Prepared by the Committee on Transportation and Infrastructure, Subcommittee on Aviation.