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S. 1451, the FAA Air Transportation Modernization and Safety Improvement Act

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Background and Summary

The Federal Aviation Administration (FAA) regulates nearly every aspect of the nation's aviation industry, including manufacturing, safety, and licensing. Recently, the FAA has faced challenges in keeping pace with the growing demands of air travel and overseeing the safety of the aviation industry. These challenges show little sign of abating, because despite recent drops in airline passenger traffic, the FAA forecasts indicate that the aviation system will transport more than one billion airline passengers annually in 2023. This is a 30 percent increase from the 757 million airline passengers in 2008.

This growing passenger demand has led to growing congestion and delay problems in the air transportation system. Despite significant cuts in capacity over the past few years, nearly 20 percent of all flights were delayed in 2009. These delays have a significant economic impact on the national economy. While estimates vary, it is clear that delays cost the national economy billions of dollars annually. In 2008, the Department of Transportation (DOT) found that the cost of delays to the national economy totaled \$9.4 billion and those delays added hundreds of millions of dollars in costs to general aviation and commercial cargo operators. The Joint Economic Committee has estimated that domestic air traffic delays cost as much as \$41 billion in 2007.

In 2004, former Transportation Secretary Norman Mineta announced the creation of the Next Generation Air Transportation System (NextGen), which is meant to address the increasing demands placed on the nation's aviation infrastructure. NextGen will provide substantial operational, environmental, and safety benefits through the use of satellite-based navigation and surveillance, digital communications, and more accurate weather services. Today's air traffic control system relies on ground-based radar systems, voice communications, and inadequate weather forecast services.

Questions about the FAA's ability to implement NextGen in a timely and effective manner have been raised due to the complexity, resource requirements, and sheer size of the modernization effort. Planning efforts have taken longer than expected, and there are difficulties in coordinating NextGen activities across Federal agencies. **S. 1451** includes several provisions to address these issues, improve accountability, and accelerate modernization programs where possible.

NextGen will drive significant improvements in aviation safety and there has been strong Congressional interest in these issues. The FAA's safety record has also come under intense scrutiny after the FAA discovered that some of the nation's air carriers had operated aircraft that had not received all safety inspections required by airworthiness directives. Moreover, the February 2009 crash of Flight 3407 in Buffalo, New York, has raised concerns regarding pilot training, flight crew fatigue, and ensuring one level of safety exists throughout the entire airline industry.

In addition to safety and modernization efforts, issues that have garnered Congressional concern that are addressed through **S. 1451** include:

- Improving commercial airline service to small and rural communities;
- Establishing better consumer rights protections for air travelers;
- Upgrades to air traffic control facilities;
- Research on environmental initiatives and improvements; and
- Creating jobs by investing in airport infrastructure.

In order to help meet those and other aviation challenges, Senators **Rockefeller**, **Dorgan**, Hutchison, and DeMint introduced **S. 1451**, the *FAA Air Transportation Modernization and Safety Improvement Act*, on July 14, 2009. On July 21, 2009, **S. 1451** was approved by the Commerce Committee by voice vote and the legislation was placed on the Senate calendar on September 29, 2009. The Senate is expected to begin consideration of the legislation during the week of March 8, 2010.

Major Provisions

Title I—Authorizations. Title I authorizes the FAA’s four major accounts (table 1) through Fiscal Year 2011: Operations; Facilities and Equipment (F&E); Research, Engineering and Development; and the Airport Improvement Program (AIP). The combined authorized levels for those programs are (\$1.06 billion) more than the Administration’s proposed Fiscal Year 2011 levels. The higher authorized levels would be enacted in order to ensure that modernization needs are addressed.

Table 1: Proposed authorized amounts for FAA accounts
(dollars in millions)

Fiscal Year	2010	2011
Operations	9,336	9,620
Research, Engineering & Development	200	206
Facilities & Equipment	3,500	3,600
Airport Improvement Program	4,000	4,100
Total	17,036	17,526

The legislation would direct \$500 million from the Air Traffic Control System Modernization Account to be included in the facilities and equipment budget. The funds from this modernization account would only be used to support the development and implementation of NextGen programs that advance the modernization of the air traffic control system.

S. 1451 would also require the FAA to clearly identify NextGen programs and spending in the agency's 10-year investment plan, and broaden the FAA's grant program for undergraduate students conducting research aimed at supporting the FAA including those that impact new technologies related to aircraft and air traffic management functions.

Title II—Airport Improvements. Title II would establish a number of new initiatives that would aid airport development and streamline the current Passenger Facility Charge (PFC) programs.

Specifically, the major sections of Title II would:

- Streamline the PFC process by simplifying approval requirements for imposing or amending PFC's, while still retaining audit controls and FAA project and expenditure oversight. Additional requirements are imposed on increasing PFC's or using the revenue for inter-modal projects. This process is based on a successful pilot program for streamlining the PFC process authorized in the last FAA Reauthorization bill passed into law – the *Vision 100-Century of Aviation Reauthorization Act (P.L. 108-176)*. The title would not change or increase the maximum allowable PFC's that are currently permitted under the program's authority;
- Require the Secretary of Transportation to establish and conduct a pilot program that would allow not more than six airports to impose a PFC without regard to dollar amount limitations if the participating airports do not collect the charge through an air carrier. The same eligibility and oversight criteria applied under the regular PFC authority would still apply to the use of the revenue in this program;
- Provide flexibility to use entitlement funds for relocation or replacement of facilities under certain circumstances, and allows airports to sell land that is no longer needed for noise compatibility purposes and use the proceeds for other AIP projects at that facility rather than putting the money back into the General Fund of the Treasury;
- Increase federal support for small airports by adjusting the government share of certain project costs to 95 percent, and allows small airports with increased operations to receive a higher federal grant share for two years as they transition to a larger airport status;

- Expand the eligibility for the AIP noise set-aside with a guaranteed minimum amount of funding;
- Broaden the authority for AIP funds to be utilized to streamline environmental reviews for airport capacity projects, and to encourage the implementation of environmentally-beneficial aircraft flight procedures;
- Promote environmental benefits at airports by permitting the FAA to carry out a limited number of environmental mitigation projects at public-use airports focused on achieving reductions in aircraft noise, airport emissions, or airport water quality impacts. The legislation would also expand the type of research that the FAA may conduct or supervise to include support programs designed to reduce gases and particulates emitted from aircraft engines; and
- Technical edits to the AIP which include adding veterans from the Afghanistan/Iraq conflict to the list of veterans eligible for employment preference on AIP projects.

Title III—Air Traffic Control Modernization and FAA Reform. Title III of **S. 1451** focuses on advancing the NextGen initiative and improving FAA management practices and oversight of the agency’s modernization efforts.

Specifically, the major sections of Title III would:

- Establish clear deadlines for the adoption of existing Global Positioning System (GPS) navigation technology, including Required Navigation Performance (RNP) and Area Navigation (RNAV) technology, which will allow aircraft to fly precise procedures into and out of airports and in the “en route” environment. The legislation initially requires the FAA to focus these efforts on the nation’s most congested airports, mandating 100 percent coverage at the top 35 airports by 2014. The entire National Airspace System (NAS) is required to be covered by 2018;
- Improve the FAA’s management practices by establishing a Modernization Board that would provide the FAA with specific oversight over its modernization activities. The Modernization Board would specifically provide advice to the FAA on its strategic plan, give approval for modernization expenditures that exceed \$100 million, and approve the selections of leaders to the Air Traffic Organization and NextGen’s Joint Planning Development Office (JPDO);
- Create a new process for resolving collective bargaining disputes at the FAA that are at an impasse;
- Require the FAA to accelerate planned timelines for integrating Automatic Dependent Surveillance-Broadcast (ADS-B) technology into the NAS. ADS-B is

considered the cornerstone GPS technology of the NextGen system and will provide substantial operational, environmental and safety benefits by increasing the situational awareness of controllers and pilots through more precise aircraft tracking;

- Mandate the use of “ADS-B Out” technology, which allows the broadcast of ADS-B transmissions from aircraft to aircraft and between aircraft and air traffic controllers, by 2015. The FAA would also be required to initiate a rulemaking that mandates the use of “ADS-B In” technology, which allows aircraft to receive ADS-B data on cockpit displays, on all aircraft by 2018;
- Require reports to Congress with specific plans for implementation of ADS-B ground station infrastructure, milestones for transitioning these new capabilities into the NAS and detailed schedules for air-to-air applications. The legislation would also direct the FAA to identify possible incentives for equipping aircraft with ADS-B technology, and the development of performance metrics that track the annual performance of the NAS, in detail, after the identification of optimal baselines;
- Establish an “Air Traffic Control Modernization Oversight Board” to provide specific oversight of FAA’s modernization activities. The Board’s responsibilities include providing advice on strategic plans for FAA modernization; approving modernization expenditures in excess of \$100 million; and approving selections of the leaders for the Air Traffic Organization (ATO) and the JPDO;
- Designate an individual to be a “Chief NextGen Officer” that would be responsible for the implementation of the NextGen programs. This position would improve accountability for modernization at the FAA and the position would be tasked with responsibility for implementation of all Administration programs associated with NextGen, and would be a tenth ex-officio member of the ATC Modernization Oversight Board;
- Strengthen government accountability for NextGen implementation by requiring all federal agencies participating in the airspace modernization effort designate a single office to be responsible for carrying out NextGen responsibilities within their Departments. This includes the Department of Defense, the National Aeronautics and Space Administration, the Department of Commerce and the Department of Homeland Security;
- Require the FAA create a specific process to complete a comprehensive study of ATC facility realignment or consolidation as the airspace system is modernized;

- Ensure contracts cannot be “imposed” on FAA workforces in the future by establishing a new process to make certain collective bargaining labor disputes at the FAA are adequately resolved by:
 - First requiring that if either the FAA Administrator or an employees’ union determines an impasse has been reached to use the mediation services of the Federal Mediation and Conciliation Service. Under mutual agreement, the groups may adopt these procedures for the resolution of disputes or impasses arising during the collective bargaining process.
 - If resolution is not reached, then the FAA Administrator and the employees’ union would be required to submit their unresolved issues to the Federal Service Impasses Panel and order binding arbitration by a private arbitration board consisting of three members.
 - In the event that the FAA Administrator and the employees’ union do not agree on the framing of the issues to be submitted for arbitration, then the arbitration board must frame the issues and shall render its decision within 90 days of appointment.
- Require the development of a process to include representatives of federal employees in the planning of ATC modernization projects, and to take specific considerations into account if entering into agreements with non-government providers of NextGen air traffic services;
- Development of a plan to accelerate the certification of NextGen technologies;
- Facilitating the integration of unmanned aerial systems (UASs) into the NAS, including a pilot program at four test sites in the U.S. by 2012;
- Creation of a Surface Systems Program Office to evaluate and implement airport surface detection technology;
- Establishment of a pilot program that permits the FAA to work with up to five states to establish ADS-B equipage banks for making loans to help facilitate equipage of aircraft locally; and
- Technical changes regarding FAA management, the ability to enter into reimbursable agreements, acquisition authority, management of property, providing assistance to foreign aviation authorities, and employee benefits.

Title IV—Airline Service Improvements and Small Community Service.

Title IV of **S. 1451** focuses on improving airline service and small community access to air service.

Specifically, the major portions of Title IV would:

- Require air carriers to develop contingency plans to handle situations in which departure of a flight is substantially delayed while passengers are confined to an aircraft. The plan must outline how the airline will ensure the passengers are provided: a) adequate food, potable water, and restroom facilities; and b) timely and accurate information regarding the status of the flight. This plan must be filed with the DOT, which must make the information publicly available. Under the plan, the air carrier must provide the passengers with the option to deplane after three hours have elapsed, except if the pilot determined the flight will leave within 30 minutes after the three hour delay or if there is a safety or security concern with doing so.
- Mandate that airlines disclose flight information to passengers when purchasing tickets and require them to post the on-time performance of chronically delayed or cancelled flights on their website including delays, diversions and cancellations that would be updated on a monthly basis. The legislation would also direct DOT to expand the breadth of subjects it considers for airline consumer complaint investigations, and establish an advisory committee for aviation consumer protection to advise the Secretary in carrying out air passenger service improvements.
- Require a DOT rulemaking that would provide the public with a list of passenger charges, besides airfare (i.e. baggage fees and meal fees), that may be imposed by the air carrier. The list must be updated by carriers every 90 days unless there is no increase in the amount or type of fees.
- Improve the Essential Air Service (EAS) and Small Community Air Service Development Program (SCASDP) by:
 - Increasing authorized funding for the EAS to \$175 million annually, a \$48 million increase;
 - Authorizing the SCASDP at \$35 million annually through Fiscal Year 2011;
 - Incorporation of financial incentives into contracts with EAS carriers to encourage better service;
 - Determining if longer-term EAS contracts are in the public interest;
 - Development of a program to create incentives for large carriers to code-share on service to small communities, and;

- Requiring large airlines to code-share on EAS flights in up to 10 communities.
- Initiate reforms of the EAS program to allow an air carrier to provide service to a desired location regardless of that location's per passenger level if a state or local government is willing to pay the difference between the actual per passenger subsidy and the allowable dollar amount for such subsidy. The legislation also authorizes a state or local government to submit a proposal for a preferred air carrier service if the state or local government is willing to pay the difference between the lowest bid and the preferred air carrier;
- Require the establishment of an Office of Rural Aviation within DOT to focus on the development of longer-term EAS contracts and to review and compare air carrier applications for EAS service from different communities;
- Allow AIP funding for converting EAS airports into a General Aviation airport if the EAS community exits the program;
- Increase funding for contract towers that benefit small communities and;
- Modify the language governing disputes between EAS communities and their air service providers.

Title V—Safety. Title V of **S. 1451** would address various aviation safety matters.

Specifically, the major portions of Title V would:

- Address several safety problem areas identified by the National Transportation Safety Board (NTSB) by:
 - Requiring the FAA to develop a plan to provide runway incursion information to pilots in the cockpit and initiate an improved process for tracking and investigating runway incursions and operational errors;
 - Requiring a National Academy of Sciences study that would consider the latest research on fatigue, circadian rhythms and international standards. The FAA would have to apply this study to its required rulemaking on flight time limitation and rest requirements. A second provision would require the FAA to implement the findings of a flight attendant fatigue study performed by the Civil Aerospace Medical Institute;
- Improve safety for helicopter emergency medical service operators and their patients by mandating an FAA rulemaking to require use of a standardized checklist of risk factors to determine whether a mission should be initiated, and creation of a standardized flight dispatch procedure for these operators. The

legislation would also require emergency medical aircraft have a terrain awareness and warning system on board within one year after the date of enactment, and the initiation of a rulemaking to require flight data and cockpit voice recorders on board these helicopters;

- Address the 2008 disclosure that domestic commercial air carriers were inconsistent in their application of Airworthiness Directives by:
 - Improving the FAA’s voluntary disclosure reporting process to ensure adequate actions are being taken in response to such reports;
 - Adopting procedural improvements for inspections that prohibit, for two years, FAA inspectors from leaving the agency to work for the air carrier for which they had oversight;
 - Tasking the DOT’s inspector general to investigate air safety concerns identified by employees and reported to the FAA;
 - Creating a national review team to conduct periodic, random reviews of the FAA’s oversight of air carriers;
 - Establishing an Aviation Safety Whistleblower Investigation Office to consider complaints and make recommendations for corrective actions, and;
 - Creating a process by which the current Air Transportation Oversight System (ATOS) database is reviewed on a monthly basis to assess trends and take appropriate corrective action.
- Review the FAA’s ATC Academy and facility training efforts for the air traffic controller workforce. The legislation also requires the FAA to clarify responsibility and direction of the facility training program at the national level and establish standards to identify the number of developmental controllers that can be accommodated by each facility. For the flight attendant workforce it requires the FAA to move forward on efforts to apply OSHA requirements to crewmembers while working in the aircraft and requires that flight attendants working in the U.S. be proficient in English language skills;
- Ensure that the FAA can continue to access criminal history databases to perform critical safety and security functions, and access abandoned type certificates and supplemental type certificates to improve FAA safety reviews. The legislation also requires the FAA to issue a final rule regarding re-registration and renewal of aircraft registration to promote the accuracy of the FAA’s aircraft registry;

- Mandate that all carriers adopt Aviation Safety Action Programs, Flight Operational Quality Assurance programs, and Line Operations Safety Audit programs, and promotes cooperation among carriers to share best practices and other critical safety information;
- Require air carriers to examine a pilot's entire history when deciding whether to hire a pilot, annual reports on the implementation of NTSB recommendations, the reevaluation of flight crew training, testing and certification requirements, and requiring annual inspections of pilot training schools and regional air carriers; and
- Ensures that FAA-certified repair stations outside the U.S. performing work on U.S. commercial air carriers will be required to have drug and alcohol testing programs in place that are acceptable to the FAA and the laws of the country in which the station is located. The legislation also mandates each foreign repair station have a minimum of two annual inspections from FAA inspectors unless there is a bilateral aviation safety agreement in place that allows for comparable inspection by local authorities.

Title VI—Aviation Research. Title VI of **S. 1451** would authorize a series of aviation research and development programs.

Specifically, the major portions of Title VI would:

- Evaluate proposals that address wake turbulence effects, volcanic ash avoidance and severe weather research (including de-icing);
- Establish a Center of Excellence to study the use of clean coal technology for aircraft;
- Create an “Advisory Committee on the Future of Aeronautics” to examine the best governmental and organizational structures for aeronautics research and development;
- Extend a program to authorize grants to nonprofit research foundations to improve the construction and durability of runway pavements, and reauthorizes funding for an Applied Research and Training Center of Excellence;
- Permanently authorize the Airport Cooperative Research pilot program which conducts environmental research;
- Require the FAA to consider and issue guidelines for the construction of wind farms in the proximity of critical FAA facilities;

- Create a program that would reduce harmful emissions from airport power sources and increase energy efficiency;
- Establish a pilot program to promote zero emissions from airport vehicles;
- Permits the FAA to conduct developmental research on unmanned aerial systems and directs the agency to assess unmanned aerial systems capabilities; and
- Authorizes funding for two current environmental initiatives the Continuous, Low Energy, Emissions and Noise (CLEEN) program and the Commercial Aviation Alternative Fuel Initiative (CAAFI). The CLEEN program will focus on expediting the integration of previously conceived noise, emission, and fuel burn reduction technologies into current and future aircraft. The CAAFI program focuses on developing alternative fuels, especially renewable fuels, that can be used in existing aircraft engines.

Title VII— Miscellaneous. Title VII of **S. 1451** includes a set of provisions that would modify and extend a range of programs.

Specifically, the major portions of Title VII would:

- Extend the authority of the Secretary of Transportation to provide war risk insurance and reinsurance until October 1, 2017;
- Require the FAA Administrator to develop a Human Intervention Management Study program for cabin crews;
- Require the FAA Administrator to establish a certification training program for the airport concessions disadvantaged business enterprise program;
- Direct the FAA to ensure that existing over-flight fees are reasonably related to agency costs of providing air traffic services;
- Instruct the GAO to conduct a study of the training of FAA systems specialists;
- Permanently require that air carriers file competitive access reports;
- Amend the *National Parks Air Tour Management Act* to incorporate GAO recommendations on commercial air tour operators in national parks;
- Phase out of Stage I and II aircraft in the continental United States;

- Prohibit the FAA from challenging weight restrictions imposed locally at New Jersey's Teterboro airport;
- Create a pilot program for the redevelopment of airport properties;
- Adjust the permitting for the air transportation of certain musical instruments;
- Include recycling and minimizing the generation of airport solid waste in the definition of airport planning; and
- Miscellaneous program extensions and technical corrections.

Legislative History

The Commerce Committee began holding hearings on reauthorizing the FAA in the 109th and 110th Congresses. Those hearings were followed up by several hearings in the 111th Congress that were focused on the modernization and safety of the air transportation system.

Senator **Rockefeller** introduced **S. 1451** on July 14, 2009 and it was co-sponsored by Senators **Dorgan**, Hutchison and DeMint.

On July 21, 2009, **S. 1451** was approved by the Commerce Committee by voice vote.

S. 1451 was placed onto the Senate calendar on September 29, 2009.

The Senate is expected to begin consideration the legislation during the week of March 8, 2010.

Expected Amendments

Senator Rockefeller introduced a substitute amendment (S. Amdt. 3452) to H.R. 1586. The substitute amendment includes a title related to the Airport and Airway Trust Fund.

Administration Position

At the time of publication, the Administration had not released a Statement of Administration Position on **S. 1451**.