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Reauthorization of the Federal Aviation Administration

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SUMMARY

The Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (FAIR21 or AIR21; P.L. 106-181), which currently provides authorization for the Federal Aviation Administration (FAA) and related aviation programs, expires at the end of FY2003. Consequently, the 108th Congress has been engaged in the process of drafting and debating legislation to reauthorize the FAA and related aviation programs for future years.

A number of issues have risen to prominence in the reauthorization debate. The condition of the airline industry, while not directly addressed in the bills, has had an impact on the debate because the aviation industry's recessionary environment has constrained the trust fund revenues that support most of the FAA budget. Increasing capacity and reducing future congestion and delay are issues that are addressed in both airport development proposals as well as proposals concerning air traffic modernization. "Environmental streamlining" is also a major element of the reauthorization debate, involving proposals to expedite environmental reviews potentially affecting the completion of airport capacity capital projects. Funding security enhancements at airports without depleting the Airport and Airway Trust Fund of funds needed to support the national system's other needs has become a significant issue in the debate. Subsidizing air service to isolated communities is a perennial issue in FAA reauthorization as are other issues such as federal aid for airport noise mitigation, aviation safety, and air traffic control privatization.

On June 11, 2003, H.R. 2115, Flight 100 – Century of Aviation Reauthorization Act, was passed by the House of Representatives (Roll Call 264). The House bill proposes a total budget of $58.2 billion over 4 years, for airport improvements, facilities and equipment, and FAA operations and maintenance. Legislation to reauthorize the FAA's research, engineering and development functions was never considered during House floor action. Parts of House introduced legislation, H.R. 2734 and H.R. 2271, are part of the conference agreement discussed below.

On June 12, 2003, the Senate passed its version of H.R. 2115, striking out the House language and substituting the amended language of S. 824. The Senate proposal is for a three-year reauthorization totaling $43.5 billion, for airport improvements, facilities and equipment, FAA operations and maintenance, and research, engineering and development. While the Senate proposal provides somewhat lower funding levels than the House, both the Senate and the House bills would provide more funding than the administration's request of $57.3 billion over four years.

On July 25, 2003, Vision 100 - Century of Aviation Reauthorization Act (H.Rept. 108-240) was reported out of conference. The conference bill would provide $59.2 billion over 4 years for FAA activities Several provisions of the conference bill are controversial, however, and have so far prevented the bill from being considered in either the House or the Senate. Most notable of these is a provision that would prevent privatization of certain air traffic control functions, but allow privatization of designated airport towers.

MOST RECENT DEVELOPMENTS

On June 11, 2003, H.R. 2115, Flight 100 – Century of Aviation Reauthorization Act, was passed by the House of Representatives (Roll Call 264). On June 12, 2003, the Senate passed a version of H.R. 2115 striking out the House language and substituting the amended language of S. 824 (Record Vote Number 225). On July 25, 2003, Vision 100 - Century of Aviation Reauthorization Act (H.Rept. 108-240) was reported out of conference.

BACKGROUND AND ANALYSIS

The Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (FAIR21 or AIR21; P.L. 106-181), which currently provides authorization for the Federal Aviation Administration (FAA) and related aviation programs, expires at the end of fiscal year 2003. Consequently, the 108th Congress has been engaged in the process of drafting and debating legislation to reauthorize the FAA and related aviation programs for future years. The Senate proposal for FAA reauthorization, the Aviation Investment and Revitalization Vision Act (AIR-V, S. 824), was reported in the Senate and proposed a three-year reauthorization for FY2004-FY2006 totaling $43.5 billion. The House proposal, H.R. 2115, dubbed Flight-100 in commemoration of the 100th anniversary of powered flight, would have reauthorized the agency's operations, facilities and equipment, and airport planning budgets for four years at funding levels slightly higher than those proposed in the Senate bill, totaling $58.2 billion over 4 years. The Federal Aviation Administration Research and Development Reauthorization Act (H.R. 2734)(not considered on the House Floor) proposed spending of about $200 million per year over 3 years for FAA's research, engineering, and development program, while the Second Century of Flight Act (H.R. 2271), an alternative introduced in the House, proposed a three-year funding plan at levels identical to the Senate bill.

Both the Senate and House bills provided for slight increases in funding across all program areas over the next three and four years respectively. By comparison, an earlier Administration's four-year proposal, also called Flight-100, proposed flat funding for airport development, held fixed at $3.4 billion per year, minor increases for other programs and significantly reduced funding for Research, Engineering, and Development.

The recently completed conference bill (H. Rept 108-240) adopts the Senate plan for airport improvements funding levels starting at $3.4 billion in 2004 and providing $100 million annual increases thereafter. The conference report also provides increased authorization levels for facilities and equipment in 2004, and significantly higher authorization levels for research, engineering, and development. The conference report otherwise mirrors the House version of H.R. 2115 with regard to program funding authorizations. A summary of the proposed funding authorizations in the House, Senate, and Administration bills and the Conference Report is provided in Table 1.

This issue brief discusses major elements of the proposed legislation and significant issues that may be considered during remaining debate over FAA reauthorization including: the economic outlook for the aviation industry and its impact on aviation program funds; initiatives to promote and ensure air service for isolated communities; funding for airport

development; initiatives to improve aviation safety and security; initiatives to promote aviation and aerospace research and technology; and FAA organizational issues.

Table 1. Reauthorization Funding Levels by Program ($ Billion).

Program		FY 2004	FY 2005	FY 2006	FY 2007
Airport Improvement Program (AIP)	Admin:	3.400	3.400	3.400	3.400
	Senate:	3.400	3.500	3.600	--
	House:	*3.400*	*3.600*	*3.800*	4.000
	Conference:	3.400	3.500	3.600	3.700
Facilities and Equipment (F&E)	Admin:	2.916	2.971	3.031	3.098
	Senate:	2.916	2.971	3.030	--
	House:	*2.938*	*2.993*	*3.053*	3.110
	Conference:	3.138	2.993	3.053	3.110
FAA Operations and Maintenance (O&M)	Admin:	7.591	7.732	7.889	8.064
	Senate:	7.591	7.732	7.889	--
	House:	*7.591*	*7.732*	*7.889*	8.064
	Conference:	7.591	7.732	7.889	8.064
Research, Engineering, and Development (RE&D)	Admin:	0.100	0.102	0.104	0.107
	Senate:	0.289	0.304	0.317	--
	House:*	0.190	*0.207*	*0.228*	--
	Conference:	0.346	0.356	0.352	0.356
TOTAL	Admin:	**14.007**	**14.205**	**14.423**	**14.669**
	Senate:	**14.196**	**14.507**	**14.836**	--
	*House***:	**13.929**	**14.325**	**14.742**	**15.174**
	Conference:	**14.475**	**14.581**	**14.894**	**15.230**

*House RE&D provisions introduced in H.R. 2734.
**House totals do not include RE&D provisions in H.R. 2734.

State of the Aviation Industry

Reauthorization of the FAA is occurring against the backdrop of the effects of the war in Iraq, Severe Acute Respiratory Syndrome (SARS) and lingering concerns about terrorism dating back to September 11. All facets of the aviation industry are operating in a recessionary environment, even though the official recession as defined by the Treasury has ended. According to the FAA's *Aerospace Forecasts for Fiscal Years 2003 - 2014* (issued March 2003), any recovery in the demand for aviation services was "stalled" even before the Iraq war started. There was an expectation, now realized, that the demand for aviation services would decrease if a war took place. In the first quarter of 2003, United Airlines alone had losses of $1.3 billion and most other U.S. air carriers, with the notable exceptions of Southwest and some other newly emergent air carriers, lost equally impressive sums. The economic pain of the current situation is not limited to the airlines, but extends across the broad spectrum of aviation industry activities.

Reauthorization is not normally viewed as a vehicle for addressing the overall financial health of the aviation industry. During consideration of AIR21, the focus was on making

sure that there would be enough air traffic control and airport capacity to facilitate the rapid growth occurring in all sectors of the industry at that time. This imperative was particularly important to the authors of AIR21, who raised funding for many FAA programs, but especially the airport improvement program (AIP).

Although aviation growth is currently "stalled" it is believed that this situation is temporary. The same FAA forecast mentioned above expected that industry growth would resume later this year, albeit at lower levels then those experienced at the end of the 1990s. It is hoped, barring further destabilizing incidents, that this industry will return to its historical growth patterns. When growth does recur many of the same concerns about overtaxed infrastructure will return.

Competition and Delay Issues. The Senate bill addresses a number of long-standing concerns about competition and delay in the overall aviation system and at key airports. A provision of the Senate bill allows the Secretary of Transportation to call for meetings between the FAA and airlines if it is deemed necessary to consider flight reductions/rescheduling at an airport. These meetings are to be held using procedures developed by the Secretary. At the moment, specific airport flight delays are not an issue, but prior to September 11 these issues arose at a number of congested airports including, for example, New York LaGuardia and Chicago O'Hare. Without this process a meeting between airlines to discuss schedules would run afoul of antitrust concerns. Another provision in the Senate bill requires that hub airports denying airline requests for facilities must notify the Secretary as why the request was denied and also identify when they expect to be able to fulfill the airline request.

The House bill also has provisions that allow for scheduling meetings during "capacity reduction events." The House plan creates a demonstration or pilot program that allows "collaborative decision making" at three airports during congested periods, in the interest of improving efficiency. There are a number of conditions that must be met for a scheduling meeting to take place and the Secretary of Transportation can offer limited immunity from antitrust law. The program is to run for two years, but can be extended for an additional two years and expanded to include up to seven additional airports.

All of the provisions discussed above are now part of the conference bill, although some aspects of each proposal have been modified. For example, the pilot program only allows for two airport participants during the first two years instead of three and the denial of facilities provision is now a biannual reporting requirement. All of these provisions while seemingly straight forward, potentially raise issues about DOT intrusion into the business decisions of airlines and local airport operators and may become controversial in the future.

Reagan National Airport Slots. There are four slot-controlled airports in the United States. In only one instance, Reagan National Airport, are the slots determined by federal statute. Reagan National has long operated with limited slots (takeoffs and landings) and with a perimeter rule that limits flights beyond 1,250 miles. These rules were originally put in place to move long haul flights to the then underutilized Dulles International Airport, and legislation that created the Washington Metropolitan Airport Authority in the mid-1980s reaffirmed them in federal statute. These rules have always been controversial. Many Washington area residents support the existing slot system and object to additional flights for noise and other environmental reasons. Some residents of states outside the perimeter

have been opposed to these rules, protesting their lack of access to the area's most convenient airport.

AIR21 broke the perimeter barrier for the first time, by allowing a limited number of additional slots for service beyond the perimeter. The House bill increases the number of slots at National adding 12 new exemptions to existing slot rules for flights outside the perimeter and 8 new exemptions for flights within the perimeter. As modified by a managers floor amendment the slots within the perimeter would not be reserved for new entrant carriers, but would be competitively available to all airlines. A further addition to the bill on the House Floor redesignates commuter slots so that they could be used by aircraft with 76 seats or less. This provision accommodates new regional jet aircraft such as those recently purchased by US Airways.

The Conference bill essentially adopts the House provisions. The bill, however, suggests that DOT consider the possibility of expanding service to western cities that could be viewed as gateways as part of its route selection process.

War Risk Insurance. Immediately following the events of September 11th private market insurance firms stopped offering terrorism coverage as part of their offerings to the airline industry. This was partially a response to the potentially large costs engendered by claims resulting from the terrorist actions and partially a concern that the announced "war on terrorism" might make this an even more risky insurance product in the years ahead. Although air carriers have traditionally provided at least some degree of insurance self coverage, they have always been reliant on the larger insurance and reinsurance markets to provide catastrophic coverage. And they must carry coverage in order to satisfy operating certificate requirements (all airlines must have an operating certificate issued by DOT), lien holders, and other interested parties.

Federally offered war risk insurance has been a feature of federal aviation policy since the cold war era. It is considered an important element in the Civilian Reserve Air Fleet (CRAF) program that makes civilian aircraft available to the military in times of national emergency. In light of the lack of a private market for terrorism insurance at what is considered a reasonable price, Congress has offered the airline industry extended coverage under the war risk program. This coverage has been extended several times, most recently by the emergency wartime supplemental appropriations for FY2003 (P.L. 108-11) which provides coverage until the end of 2004. Reauthorization proposed in the Senate bill would extend this coverage until the end of 2007, thereby giving U.S. air carriers an extended period of certainty on the availability of coverage. An amendment adopted in Committee would extend war risk insurance to aircraft manufacturers for the first time. Eligibility would be at the discretion of the Secretary and could only apply for loss or damage claims of over $50 million. The House bill also extends war risk insurance to the end of 2007 for the domestic market. However, for international flights the House proposes to make federal war risk insurance availability permanent. The Conference bill is similar to the Senate version, but extends the program until March 30, 2008. Subject to DOT approval, aircraft manufacturers will be able to obtain war risk insurance in certain circumstances.

Improving Air Service to Isolated Communities. The Essential Air Service (EAS) program and the Small Community Air Service Development (SCASD) Pilot Program were designed to address the difficulties in obtaining and maintaining air service in small,

isolated communities where access to the national air transportation system is limited. Both the House and the Senate bills and the conference bill seek to reauthorize these programs and restructure the EAS program. Additionally the House bill and the Conference bill propose to establish a National Commission on Small Community Air Service.

The Essential Air Service Program. EAS provides subsidies directly to air carriers for providing service between selected small communities and hub airports. The program was originally established in 1978 as part of airline deregulation to ensure a minimum level of air service at smaller communities that may otherwise lose service because of economic factors. At present, 125 communities in the United States and its territories participate in the EAS program and this number is expected to increase given that current financial conditions may prompt air carriers to discontinue service without subsidies. However, the effectiveness of the current EAS program has been questioned as total passenger traffic among EAS communities has declined 20% since 1995.

The Senate seeks to authorize a funding level of $113 million per year for EAS, while the House bill would authorize funding levels of $115 million per year. The conference bill would authorize a total of $127 million annually, of which not more than $12 million would fund the proposed marketing incentive program included from the Senate bill. Several modifications have been proposed to increase program flexibility and transportation options to link EAS communities to the national aviation network.

The Senate plan incorporated into the conference bill includes a marketing incentive program that can provide EAS communities with grants of up to $50,000 for implementing marketing plans to increase ridership. Communities must be willing to match 25% of the grant with non-Federal funds, but the proposal includes incentives to offset these costs, dropping the non-Federal share to 10% the following year if the community realizes a 25 percent gain in ridership, and to zero if the community achieves a 50 percent increase in ridership. The Senate and Conference bills would authorize up to $12 million each year to fund this initiative. The Senate and Conference bills also include a proposed community flexibility plan allowing up to 10 EAS communities to opt out of the program for a 10-year period in exchange for a grant equivalent to 2 years of EAS.

The House bill contains additional provisions for a community and regional choice program as an alternate to EAS that were incorporated into the conference bill. The community and regional choice program would be established an alternative to EAS in which eligible communities are funded directly and can then use the funds toward a variety of air transportation options that are not available under the traditional EAS program. Eligible communities would be able to use funds received to provide subsidies to an air carrier or an on-demand air taxi service; for scheduled or on-demand surface transportation linking the community with another airport; to purchase aircraft or fractional ownership in aircraft; or to pay for other transportation options approved by the DOT. The Conference bill would delay use of fractionally owned airplanes until the FAA issues specific rules pertaining to fractional ownership.

An amendment to the House bill that was incorporated into the Conference bill would require the DOT to establish a consistent standard for calculating milage and to consult with state officials when calculating the most commonly used highway distance to a hub airport

when determining EAS eligibility. The Senate version contains a similar provision that would only apply to Lancaster, Pennsylvania.

Small Community Air Service Development Program. Both the House and Senate bills contain provisions to reauthorize the Small Community Air Service Development (SCASD) Pilot Program. The program was established under AIR 21 to develop solutions for improving air carrier service to communities that are experiencing insufficient access to the national air transportation system. The funding provides direct grants to selected communities for implementing strategies to improve the availability and pricing of air service. The General Accounting Office (GAO) has cautioned that it is still too early to assess the long term impact of this program and has noted that many of the programs receiving grants appear similar to prior programs tried by communities using state, local, and private funds and may not be sustainable beyond the period of subsidized funding. The Senate bill specifies $27.5 million per year for the program, whereas the House bill and the conference bill would authorize $35 million per year. While the House bill sought to remove the per state limit on grants, the conference bill would set a limit on grants recipients to 4 per state each fiscal year. The conference bill would remove the designation of the program as a 'pilot' program.

Airport and Airway Trust Fund (Aviation Trust Fund) Issues

The airport and airway trust fund, also known as the aviation trust fund, provides all funding for three of the FAA's four major programs; the Airport Improvement Program (AIP), Facilities and Equipment (F&E), and Research, Engineering, and Development (RE&D). It also provides significant funding for the Operations and Maintenance Program (O&M). O&M, however, as a result of long standing agreements, also receives funding from U.S. Treasury General Funds. The split between trust fund and general fund monies on O&M has always been somewhat controversial and could again become an issue in this reauthorization cycle.

The poor economic condition of the aviation industry is having a negative effect on trust fund revenues. Trust fund revenues more than doubled between FY1990 ($4.9 billion) and FY2000 ($10.7 billion). The trend, however, changed dramatically in the new century. In FY2001, revenues fell slightly to $10.2 billion. In FY2002 they dropped slightly again to $10.1 billion. Predictions made prior to the Iraq War, which now might be optimistic, foresaw a slight increase in FY2003 to $10.2 billion, followed by a recovery in more typical growth to an FY2004 level of $11.1 billion. Because aviation spending has remained constant, as required by AIR21, there has been a steady decline in the uncommited balance in the trust fund, which stood at $4.8 billion at the end of FY2002.

AIR21 created a budgetary regime for aviation programs that was closely linked to the availability of funds in the trust fund. In simple terms, appropriators were required to fully fund AIP and F&E at authorized levels, and must further account for all trust fund revenues prior to determining the general fund share that would be provided for O&M in a fiscal year. This is a part of the so-called funding "guarantee" that is designed to insure that all trust fund income is spent on aviation and not other transportation activities. Both the House and Senate bills continue this process as does the Conference bill.

The Senate, House, and Administration reauthorization proposals call for only modest growth in the FAA budget (just over $14.0 billion in FY2004). The House, however, provides somewhat more funding over four years, primarily for the AIP program. The Conference bill is a compromise. It adopts the House's four year structure, but reduces its AIP funding amounts slightly in favor of increases in other FAA program areas. By maintaining the growth in spending at a modest level the fill seems to side step any trust fund solvency concerns.

Airport Development

The Airport Improvement Program (AIP) provides federal grants for airport development and planning. AIP funding is usually limited to capital improvements related to aircraft operations. Commercial revenue producing portions of airports and airport terminals are improvements that generally are not eligible for AIP funding. AIP money cannot be used for airport operational expenses or bond repayments. AIP funds are distributed either as formula grants or as discretionary grants. Under AIR21, roughly two-thirds of AIP funding was distributed by formula and the remaining third as discretionary grants. Small airports are much more dependent on AIP grants than large and medium hub airports. These airports can more easily generate revenue from user fees and have historically had the financial wherewithal to successfully access the bond market.

The Passenger Facility Charge (PFC) program provides a source of non-federal funds intended to complement AIP spending. The PFC is a local tax imposed, with federal approval, by an airport on each boarding passenger. PFC funds can be used for a broader range of projects than AIP grants and are more likely to be used for "ground side" projects. PFCs can also be used for bond repayments (a more detailed description of airport funding can be found in CRS Issue Brief IB10026).

Reauthorization Proposals and Issues. Both the House and Senate bills include provisions that would impact the AIP program's long standing priorities and objectives. Although the bills include a number of similar provisions their core proposals are focused on different goals. As shown in the earlier table, both bills provide modest increases in AIP funding. Much of the Senate bill's legislative attention is directed toward facilitating capacity enhancing projects, especially toward the major airports included in the FAA's 2001 Airport Capacity Benchmark study. The House bill redirects some funds from large airports to smaller airports and cargo airports. The bill attempts to address a broad range of concerns about the operation of the AIP program and make perfecting rather than major changes. The Conference agreement includes a blend of the House and Senate proposals.

Apportionment and Eligibility Changes: Relief and Support to Small Airports. The conference agreement includes provisions that protect small airports from having their apportionments reduced in FY2004 because of reduced traffic levels. Cargo airports formula percentage would be raised to 3.5%. Non primary airports would be allowed to use their entitlements for revenue generating areas if the Secretary of DOT determines that the sponsor has made adequate provisions for the airside needs of the airport.

Discretionary Fund Changes. The conference agreement would increase the discretionary set aside for noise compatibility projects from 34% to 35%. Eligibility would

be expanded to include noise mitigation projects approved in an environmental record of decision for projects designated as national capacity projects.

Airport Noise Issues. Airport noise policy is linked to airport development because airport noise is a major factor in local resistance to airport capacity projects. The conference agreement includes provisions effecting the availability of AIP grants for state and local governments land use compatibility plans. The bill, as mentioned earlier, would raise the noise AIP set-aside to 35%, and includes language to make noise mitigation projects, approved in an environmental record of decision for a project designated as a national capacity project, eligible for AIP noise mitigation funding. This appears to provide, under certain conditions, for AIP funding of projects at airports that have not submitted a noise compatibility plan, as is now required.

Passenger Facility Charge Issues. The conference agreement includes provisions to streamline PFC public notice requirements as well as ending the "significant contribution" project requirement on large and medium hub airports that wish to impose PFCs at the $4 and $4.50 level. The requirement of notice and consultation of air carriers at applicant airports is limited to carriers that have no less than 1% of the boardings at the airport, 25,000 boardings, or provides scheduled service at the airport. The bill would also establish a pilot program to test alternative procedures for authorizing small airports to impose PFCs. The bill also makes conversion of ground support equipment to low emission technology eligible for PFC funds. The agreement also empowers the Secretary to allow the use of PFCs for debt service for indebtedness on non-eligible non-airport related projects if the Secretary finds that such project funding is necessary due to an airports financial need.

Privatization. The conference agreement would amend the Airport Privatization Pilot Program, dropping, for small and non-hub airports, the requirement that 65% of airlines at an airport approve of the privatization. Air carrier nonapproval would have to be filed within 60 days or approval would be granted.

Airport Security Project Eligibility. The conference agreement repeals the authority to use AIP or PFC funds for airport security purposes. These costs are to be paid for from a proposed Aviation Security Capital Fund (see "Security Enhancements at Airports", below).

Runway Safety Areas. The House bill contains a provision that would make runway improvement grant approvals contingent on assurances that the sponsor will, to the maximum extent possible, improve the runway's safety area to meet FAA standards for passenger airports. However, the bill also contains a provision that would prohibit the FAA from reducing an airport's runway length or declaring a runway less than the actual pavement length to meet runway safety area criteria for passenger airports. The Conference bill limits the applicability of this provision to airports in Alaska and directs the DOT to study the potential impact of applying these runway safety area standards at airports in other states.

Reducing runway length may limit access by larger aircraft at certain airports and may limit future expansion of air service. The NTSB recently recommended that runways at passenger airports be upgraded immediately to meet FAA's runway safety area criteria following the March 5, 2000 mishap at Burbank, CA, where a Southwest Boeing 737 overran the runway.

Environmental Streamlining. The House and the Senate both include provisions that can be described as proposals to accelerate the completion of major airport safety and capacity projects by streamlining the environmental review process.

The conference agreement designates the DOT as the lead agency in the project review process and directs the Secretary to develop a coordinated process for major airport capacity projects that will assure simultaneous review by all government agencies. The agreement adopted much from the House bill which included the most extensive environmental streamlining provisions. The bill provides detailed information on how environmental reviews are to be conducted to reduce the amount of time and number of reviews required for new airport project approval.

Airway Facilities Improvements and Air Traffic Modernization

Airway Facilities consist of elements that comprise the infrastructure of the national airspace system and include navigational aids, communications equipment, radar equipment, weather equipment, air traffic management systems, and so on. Funding for the acquisition, operation, and maintenance of airway facilities is derived from the Airport and Airway Trust Fund and comprises about 20% of FAA's spending. FAA programs to improve the accessibility, capacity, and safety of the national airspace system have been the subject of Congressional scrutiny and frequent criticism over the past 20 years as the result of numerous cost overruns, schedule delays, and failures to meet program objectives. While current economic conditions have decreased the demand on the aviation system, FAA faces a critical challenge in the next 5 to 10 years to enhance the performance of the national airspace system to meet anticipated growth in demand. An amendment to the House bill would authorize $200 million for exploring new, innovative procurement techniques for modernizing air traffic control systems.

Cost Sharing for Air Traffic Modernization Projects. The Senate bill contains provisions to foster non-federal investment in critical air traffic control facilities and equipment, such as airport navigation capabilities, weather sensing, runway lighting, and air traffic control towers, by providing permanent authorization to carry out up to 10 cost-sharing air traffic modernization projects each fiscal year. Under the plan, cost-sharing arrangements between the FAA and non-federal sponsors such as an airport, an air carrier, or a joint venture between an airport and one or more air carriers, can be made to fund airport-specific air traffic facilities and equipment. This concept was demonstrated in a three-year pilot program, enacted as part of AIR21, that funded 10 air traffic modernization projects where sufficient federal funds were unavailable. However, under the program proposed in the Senate bill federal funds for a project would be limited to the lesser of one-third of the total program cost or $5 million, as compared to a $15 million cap in the pilot program. The proposed changes will allow more flexibility in the composition of non-federal project sponsors, allowing airlines to participate without establishing a partnership with an airport. However, the current economic status of the airlines makes it unlikely that they will provide a significant near-term source of non-federal funding for air traffic modernization projects. Also, the smaller cap on federal funds may mean that smaller scale projects may be undertaken in the future. This program is most likely to benefit those airports that derive larger revenues from PFCs and commercial activity and, consequently, are capable of funding larger scale air traffic modernization projects with more limited federal funding.

Wake Vortex Advisory System. The House bill authorizes $20 million per year of facilities and equipment expenses for FY2004-FY2007 to demonstrate the operational benefits of a wake vortex advisory system. The Senate bill, on the other hand, directs the National Research Council to conduct an assessment of FAA's wake turbulence research program. The conference bill authorizes $500,000 for fiscal year 2004 to carry out the Senate-proposed assessment, and such sums as may be necessary for development and testing of wake vortex advisory systems.

Wake vortices produced by heavy jet aircraft have been identified as factors in a small number of aircraft accidents, and the contribution of a wake turbulence encounter in the November 2001 crash of American Airlines flight 587 at JFK airport, the second deadliest in U.S. history, is still under investigation. Current air traffic procedures specify separation standards for aircraft departing behind large and heavy jets to allow their wake vortices to dissipate. Some view these standards as overly conservative and argue that accurate wake vortex prediction capabilities could allow for decreased separation thereby increasing airport capacity in many weather conditions. Others argue that the limited capability of available technology and the complexities of wake vortex propagation make it difficult to predict wake turbulence or use such predictions to reduce arrival and departure spacing without compromising safety.

Ground-Based Precision Navigation Aids. Both the House and Senate bills and the conference bill contain provisions for the installation, operation, and maintenance of ground-based precision navigational aids at mountain airports. The House and conference bills specifically target implementing navigational aids that can also provide curved and segmented guidance for noise abatement purposes. However, even with funding for precision navigation systems, currently available ground-based navigational aids are not always viable options at these airports due to terrain constraints on approach procedures. Accessibility to many of these mountain airports has improved significantly over recent years and continues to improve through the use of satellite-based navigation using the Global Positioning System (GPS). However, this system is not yet capable of providing the needed precision for vertical guidance. Consequently, the FAA has proposed a plan to develop approach procedures with vertical guidance that will likely rely on a combination of satellite-based, ground-based, and on-board navigational sources. Programs to increase precision navigational capabilities at airports may need to provide sufficient flexibility to accommodate these anticipated changes in precision approach procedures.

Gulf of Mexico. The House and Senate bills contain provisions for improving air traffic services in the Gulf of Mexico. These provision will most directly benefit helicopter operations that support the large offshore oil industry, but may also benefit smaller aircraft operating below 18,000 feet over the gulf. The conference bill adopts the language in the House bill that would fund the program with money from the Facilities and Equipment account.

Enhancing the Safety and Security of the Aviation System

Security Enhancements at Airports. With the passage of the Aviation and Transportation Security Act (ATSA, P.L. 107-71) following the terrorist attacks of September 11, 2001, the aviation security function was significantly expanded and passed from the FAA to the newly formed Transportation Security Administration (TSA).

Nonetheless, airport security projects, such as expanding and modifying passenger checkpoints and installing explosive detection systems for checked baggage, have had a significant impact on AIP funds allocated to airports. The Senate bill contains a provision to establish an Aviation Security Capital Fund funded by aviation security fees to relieve some of the demand on AIP funds from airport security projects. The Senate bill also instructs the Department of Homeland Security to study the effectiveness of the aviation security systems and redeploy aviation security assets based on the findings of this study. An amendment to the House bill would require that airports and air carriers be reimbursed for certain direct and indirect costs, such as the loss of retail space to security checkpoints, associated with airport passenger screening.

Several airports, especially many of the large hub airports, currently face significant challenges in funding projects to relocate explosive detection systems for checked baggage temporarily housed in ticketing and check-in areas and develop in-line systems that incorporate these machines into baggage handling facilities. Some estimate that the systemwide costs to complete installations of in-line baggage screening systems may be as high as $3 billion. The Senate bill would allow DOT to establish an Aviation Security Capital Fund derived from passenger and air carrier security service fees. The Senate bill also proposes to authorize funding levels of $500 million per year for FY2004 through FY2007 for the fund with: 40% to be made available to large hub airports; 20% to medium hub airports; 15% to small hubs; and the remaining 25% to be distributed at the Secretary of Transportation's discretion. Under this plan, hub airports would have to pay for 25% and non-hubs would have to pay for 10% of a security project's costs using nonfederal funds. Federal funds will be apportioned to airports using a formula based on the percentage of enplanements that each airport experiences within its respective category. The conference bill retains the Senate bill concept of an aviation security capital fund, but limits use of security fees for this fund to $250 million of the $500 million total. However, the aviation security fees designated to fund this program do not cover even the current operating budget for aviation security. The FY2004 President's budget indicates estimated receipts of $2.488 billion from aviation security fees that are now identified as offsetting collections for the Transportation Security Administration's proposed $4.812 billion budge. Of the TSA's overall budget, $4.217 billion is designated for aviation security. The roles and responsibilities of FAA and TSA regarding aviation security projects at airports and funding sources for these projects may require further clarification.

FAA Oversight of Operators and Maintenance Facilities. U.S. air carriers are increasingly outsourcing maintenance to third-party repair stations. Outsourced maintenance accounted for 47% of air carriers' total maintenance costs in 2001. However, FAA inspections of domestic repair stations are only required once annually and oversight of many repair stations located in foreign countries is delegated to inspectors from those foreign countries. FAA is currently revising the regulations governing the 5,200 FAA-certified repair stations, about 600 of which are located in foreign countries, to improve bookkeeping, training, and quality control at these maintenance facilities. FAA currently employs 628 aviation inspectors to oversee these repair stations, however some in Congress have been concerned over these staffing levels and the degree of FAA oversight at repair stations, particularly at the 2,800 repair stations that perform maintenance on the air carrier fleet. The Senate bill and the conference bill contain provisions that would require the FAA to develop an action plan for providing adequate oversight of repair stations and ensure that repair

stations in foreign countries are subject to the same level of oversight and quality control as domestic repair stations.

Oversight of operations and maintenance practices at 10 of the largest passenger air carriers in the United States is currently conducted under the Air Transportation Oversight System (ATOS). As compared to more traditional inspection methods that rely heavily on individual inspector expertise and focus on regulatory compliance issues, ATOS is a data-driven program that relies on risk assessments and analysis to focus inspection activities on particular areas where safety deficiencies might be expected at a specific air carrier. While the program's objectives and principals are generally viewed as a positive change for aviation safety, reviews of the program have revealed that its effective implementation has been hindered by a lack of standardization; a lack of adequate tools to help inspectors track safety deficiencies and corrective actions; insufficient training; and inefficient allocation of human resources. The Senate bill contains provisions for FAA to develop an action plan to correct existing problems with the ATOS system and extend the program to oversight at more than 100 smaller air carriers in addition to the major passenger air carriers currently in the program. These provisions would require the FAA to develop inspection checklists for FAA inspectors and safety analysts; provide training in systems safety, risk analysis, and auditing to FAA safety inspectors; ensure that inspectors are physically located where they are most needed; and establish a strong central leadership for ATOS that will ensure that the system is consistently implemented and expanded. Given current implementation difficulties with the ATOS program, further expansion and refinement of the system may present significant challenges.

Another concern is that FAA maintenance and operations inspectors may lack the continuing training needed to keep up with current technologies. The House bill contains a provision, adopted in the conference bill, directing the Comptroller General to study the training of FAA aviation safety inspectors, expressing a sense that FAA inspectors should get the most up-to-date initial and recurrent training on job-related aviation technologies. Congress has also expressed concern over the adequacy of FAA's inspector workforce, particularly their ability to adequately oversee the aviation industry, and the increased use of designees to carry out inspection duties. The House and conference bills also direct the National Academy of Sciences to study the staffing methods FAA employs for determining its air safety inspector workforce and suggest improved methods for assessing inspector staffing needs.

Aviation Maintenance Training and Manuals. The House and conference bills contain a provision directing the FAA to ensure that training standards and certification of aviation mechanics are updated to more accurately reflect current technology and maintenance practices. A recent GAO report found that the current FAA-developed aviation maintenance curriculum is significantly outdated and is not adequate for training mechanics to work on the advanced technology and materials commonly found in modern commercial aircraft. The report recommended that FAA review and revise the curriculum.

Another provision of the House bill would require aircraft manufacturers to provide all necessary maintenance manuals and related information to owners, operators, and repair stations at no more that what it costs to prepare and distribute these documents. Neither the Senate bill nor the Conference bill contain such a provision.

Flight Attendant Certification. At present, federal regulations specify that cabin crew are required on passenger flights using aircraft with 10 or more passenger seats. These regulations identify training requirements; required duties; duty time and rest regulations; airline drug testing program participation; and airline and FAA oversight, for flight attendants. However, the FAA does not currently certify flight attendants or establish specific training program and proficiency requirements for credentialing cabin crew. The House and Senate bills as well as the conference bill contain provisions that would mandate the certification of flight attendants. The objective of these measures is to develop industry harmonization regarding flight attendant training and procedures. Opponents have argued that this provision could result in a proliferation of unnecessary regulations governing the certification of flight attendants that will increase the training and regulatory burden on airlines without a clear benefit to aviation safety. On the other hand, proponents point out that certification is required for other airline safety-critical personnel besides pilots, such as aircraft dispatchers, and flight attendant certification would improve airline safety by establishing industry-wide training and proficiency standards.

Cabin Air Quality. Both the House bill and the Senate bill contain provisions directing the FAA to conduct a research program on airliner cabin air quality. The provision in the House version specifically directs FAA to assess ozone levels, pesticide exposure, and other contaminants to which passengers and crew are exposed on a representative number of aircraft and flights. An amendment to the Senate bill further specifies the scope of the study to include an assessment of compliance with existing regulations regarding ozone levels, pesticide and contaminant exposure, and cabin pressure and altitude. The Senate version would also establish a cabin air quality incident reporting system. The Conference bill adopts the language of the Senate bill regarding cabin air quality.

Investing in the Future of Aviation

Much of the direction for FAA's Research, Engineering, and Development (RD&E) funding and initiatives for investing in aerospace and aviation safety research and technology development contained in the Senate bill was adopted from the Second Century of Flight Act (S. 788). The Senate bill identifies several initiatives to address future needs and challenges in: aviation system safety and security; aviation system capabilities; aircraft noise, emissions, and fuel consumption; and efforts to maintain leadership and progress in aviation and aeronautics. Two separate House bills were under consideration. H.R. 2271, the Second Century of Flight Act, proposes the same funding levels as the Senate bill and contains similar language regarding identified research, engineering and development projects and initiatives. The Federal Aviation Administration Research and Development Reauthorization Act (H.R. 2734) was reported by the House Science Committee, but not considered on the House Floor, and contains an alternative plan for FAA research, engineering and development funding and identifies additional aviation research initiatives. Parts of these bills appear to be incorporated in the Conference bill.

Coordination of Research and Development Efforts. The Senate bill and H.R. 2271 seek o establish an Office of Aerospace and Aviation Liaison within DOT, with an annual budget of $2 million for FY2004 and FY2005, to coordinate aviation and aeronautics research programs in an effort to develop more effective and directed research programs by coordinating goals, priorities, and research activities across the Federal government and with the aviation industry to facilitate technology transfer. The legislation also proposes to

establish a National Air Traffic Management Development Office within FAA to develop a next generation air traffic management system plan for the United States with input from government and private sector stakeholders representing commercial aviation, general aviation, and the space industry. Both bills would authorize $300 million over a six-year period from FY2004 through FY2010 for this function. The conference bill instead adopts language from H.R. 2734 that seeks to establish a Next Generation Air Transportation System Joint Planning and Development Office with an annual budget of $10 million through FY2010.

Aviation and Aerospace Education. The Senate bill, H.R. 2271, and the conference bill also contain provisions for an initiative that would provide NASA and FAA-sponsored merit-based grants, loans, and internship programs for higher education in fields related to aerospace and aviation safety. The Senate bill provides for such sums as may be necessary for NASA and FAA to establish and administer the program in FY2004 and requires the agencies to jointly determine whether such a program should be extended for additional years, while H.R. 2271 proposes funding levels of $5 million in 2004 and $7 million in 2005 but stipulates that at least 50% of the costs be derived from nonfederal sources. Both bills also provide for a scholarship for service program. A separate provision in the Senate bill would authorize such sums as may be necessary to carry out and expand the Air Traffic Control Collegiate Training Initiative.

Identified Research Programs. In addition to those already mentioned, both the Senate bill and H.R. 2271 identify airfield pavements and pavement standards as a research area to be addressed by the FAA. The legislation also directs FAA to establish a center for excellence in advanced materials, such as composites, for transport category aircraft. Both bills propose to authorize $500,000 for FY2004 to develop the center. Finally, the legislation directs FAA to conduct a study on reducing aircraft noise and emissions and increasing aircraft fuel efficiency. H.R. 2734 seeks to establish an Airport Cooperative Research Program to identify and fund research on airport issues not adequately addressed by existing federal research programs, create a research program to study existing certification methods and reduce the cost of new product certification; and conduct research assessing the impact of new technologies and procedures on pilot and air traffic controller training. The conference bill adopts these proposed research areas as part of the overall FAA research, engineering, and development program.

FAA Organizational Issues

Chief Operating Officer (COO). This position was created by AIR21. The COO was supposed to allow the FAA to hire someone with experience operating high technology integrated systems like air traffic control. The COO position, however, has never been filled, which is a controversy in itself. Several candidates have apparently turned down the position based on what many considered to be a very difficult job at a pay scale far below what might be offered for a similar position in private industry. As defined in AIR21 there was a concern that the job might sound more like a chief executive officer (CEO) position than a COO position. This would have potentially caused concern about the relationship between the COO and the FAA Administrator who by statute functions as the Agency's CEO. Legislation proposed by the House and by the Senate, and now the Conference bill, would seek to clarify this relationship and does so in their respective bills. The proposals are

intended to make the COO position itself more desirable and make it more likely that this position will be filled in the near future.

Air Traffic Control Privatization. The House bill includes a provision that prohibits privatization of the ATC system. During floor debate, the Senate bill was amended to include a somewhat broader privatization prohibition. Privatization has often been discussed as a possible way to increase the efficiency of the ATC system while at the same time reducing its cost. The idea has been discussed in many contexts during the last decade, but never acted upon by Congress. Recent action by the Bush Administration, removing ATC from its definition of inherently governmental functions, was viewed by some as a precursor to a privatization proposal, though no such proposal has been made.

In Conference a less stringent prohibition on privatization was adopted that precludes transfer of ATC to a private or public entity prior to October 1, 2007. The provision, however, allows the contract tower program to expand at certain levels as defined in the bill. This provision was inserted without support from Minority Conference Committee Members and represents an agreement reached by the Majority Members of the Conference and the Bush Administration. This has become the most contentious item in the bill with some Members vowing to try to defeat the Conference Report unless this provision is eliminated. The Union representing air traffic controllers has been particularly critical of the provision and has launched a wide ranging campaign to see that this provision is not adopted.

CONGRESSIONAL HEARINGS, REPORTS, AND DOCUMENTS

January 9, 2003: *The Future of the Airline Industry*. Senate Committee on Commerce, Science and Technology
February 11, 2003: *FAA Reauthorization*, Senate Committee on Commerce, Science and Technology.
February 12, *2003:Reauthorization of the Federal Aviation Administration and the Aviation Programs: Introduction*. House Aviation Subcommittee.
February 25, 2003: *Airport Improvement Program and Other Airport Financing Issues*. Senate Aviation Subcommittee.
March 5, 2003: *FAA Reauthorization - Airport Financing*. Senate Aviation Subcommittee
March 6, 2003: *Reauthorization of the Federal Aviation Administration and the Aviation Programs: Airports*. House Aviation Subcommittee.
March 11, 2003: *FAA Reauthorization - Air Service to Small Communities*. Senate Aviation Subcommittee
March 12, 2003: *Reauthorization of the Federal Aviation Administration and the Aviation Programs: Commercial Aviation*. House Aviation Subcommittee.
March 27, 2003: *Reauthorization of the Federal Aviation Administration and the Aviation Programs: Testimony From the FAA Administrator and Witnesses Representing FAA Employees*. House Aviation Subcommittee.
April 9, 2003: *Reauthorization of the Federal Aviation Administration and the Aviation Programs: General Aviation*. House Aviation Subcommittee.
April 10, 2003: *FAA Reauthorization*. Senate Committee on Commerce, Science and Technology

FOR ADDITIONAL READING

CRS Issue Brief IB10032. *Transportation Issues in the 108th Congress*.

CRS Issue Brief IB10026. *Airport Improvement Program.*

CRS Report RS21321. *Aviation Taxes and Fees: Major Issues.*

CRS Report RS20914. *Aviation Congestion: Proposed Non-Air Traffic Control Remedies.*