# Airport Improvement Program (AIP) AFF

A few things to consider if you decide you want to run this AFF:

* Depending on which advantages you decide to read, you may want to reword the plan text more strategically to get around some of the solvency arguments included in the NEG file in regards to what projects the funding would be used for. For example, if you decide to roll with the environment advantage perhaps you should specify in the plan text that the AIP funding will be used for VALE projects. That way you don’t have to just rely on the argument/evidence that indicates the projects would be a top priority to get solvency for the advantages.
* The NextGen add-on can be read with the current plan text as a few of the cards indicate that NextGen will be held up/ineffective simply because airports don’t have the money to finance infrastructure projects that would be needed to implement it (1AC Principato evidence says that, for instance). However, if you want to utilize the NextGen stuff as more than just a 2AC add-on, you should consider specifying in the plan text that the funding increase for AIP include flexible eligibility for NextGen investments (Elwell 08 is your solvency advocate for that, included in this file under the NextGen extensions). Flexible eligibility changes have been made to AIP before following the 9/11 attacks in order to allow for increased funds to go into security projects. If you decide to go the NextGen route more work on that aspect of the debate is likely required.

If you have questions about this file or this AFF feel free to email [johnsonmegan@gmail.com](mailto:johnsonmegan@gmail.com). ☺

# 1AC Inherency

#### Status quo funding for the Airport Improvement Program is insufficient and will remain so through at least 2015

**Compart 12** (senior editor for Aviation Daily and editor for Aviation Week & Space Technology, Andrew Compart,Airport Funding To Take Hit Under Obama Administration Budget, February 20, 2012, Lexis) LP

Here’s the rub: Congress just rejected attempts to include an increase in the PFC cap in the reauthorization bill, so there does not seem to be any prospect for that happening before 2016. President **Obama** last week **signed the reauthorization bill into law. «This budget is four years too late and the only thing it accomplishes is to harm the A**irport **I**mprovement **P**rogram, which the flying public pays for through the ticket tax,» complains ACI-NA President Greg Principato. **The organization says it has documented $80 billion of AIP projects that need to be done**, and that **AIP funding** already **is on track to be** nearly **50% lower in constant dollars through 2015 than the peak year of the funding in 2006**. Less clear was the potential for proposed cuts to the contract tower program. Many aviation organizations feared that the administration was eyeing potential cuts in funding for all contract towers at airports that do have commercial service. However, the budget made no indication of such cuts. **NextGen initiatives would benefit under the budget proposal.** The administration is proposing to spend just more than $1 billion on NextGen-related air traffic control (ATC) projects in fiscal 2013, 11% more than in fiscal 2012. The industry has pushed for an increasing commitment to NextGen, and its message appears to have gotten through.

#### **This means significant delays for vital security and modernization projects**

Liang 11 (Keith, “Airports Council: Fund improvement program in 2013”, The Hill, August 22, 2011, http://thehill.com/blogs/transportation-report/aviation/177767-airports-council-fund-improvement-program-in-2013-)//IIN

"As you begin to prepare your Fiscal Year 2013 budget proposal, I urge you to consider the impact airports have as local economic engines in communities across the country," Principato wrote Monday. "Now is the time for airports to invest in infrastructure, safety and security projects that not only benefit the traveling public but also create jobs and spur growth in cities and towns around the United States." Principato said the airport improvement program has been funded at the same levels as in 2006, which makes it difficult to budget for rising construction projects. He said the need for airport construction warranted additional funding in 2013. "According to both [Federal Aviation Administration (FAA)] and industry studies, the need for [airport improvement projects (AIP)] far exceeds existing grants, therefore any proposed reductions to AIP funding will mean significant delays for vital safety, security and modernization projects, negatively impacting the traveling public and ultimately our national economy," he said.

# 1AC Plan Text

#### The United States federal government should substantially increase funding for the Airport Improvement Program.

# Econ Advantage

#### **Current flight demand exceeds supply causing chronic delays that ripple through the entire airline industry costing billions**

Ferguson 12 – Doctor of Philosophy (John, “A METHODOLOGY FOR EVALUATING ECONOMIC AND POLICY IMPACTS ON AIRLINE AND PASSENGER BEHAVIOR”, Spring 2012 – George Mason University, http://catsr.ite.gmu.edu/pubs/Ferguson\_Dissertation\_Final\_2012\_seApr25\_v3.pdf)//IIN

BACKGROUND OF CONGESTION PROBLEM The air transportation system is a significant driver of the U.S. economy, providing safe, affordable, and rapid transportation. At most airports, air transportation flight demand is below maximum available flight throughput capacity allowing any airline access to runways and enabling better on time operations unless weather or operational conditions reduce capacity substantially**.** However, the flight demand (and scheduled operations) at the busiest airports in the US often approaches and exceeds the flight capacity of those airports (NEXTOR et al. 2010). When schedules are not reduced to at or below the airport’s maximum throughput capacity, demand outstrips supply and delays result. Equally important, delays at these busy airports propagate to other airports creating system-wide delays when crews and aircraft do not arrive at their next destination in time to allow the subsequent departure to meet its scheduled departure time (Welman et al. 2010) . This situation is confounded by the fact that for the past three decades airport flight capacity has not grown in step with demand for air transportation (+2.0% annual growth for the past 20 years, Table 1), resulting in unreliable service and systemic delays. **Estimates of the impact of delays and unreliable air transportation service on the economy range from $32.3** B/year (NEXTOR et al. 2010) **to $41B/year** (C. E. Schumer and C. B. Maloney 2008).

#### And, airports are key to millions of jobs and account for 8 percent of U.S. GDP – empirically investment in the AIP has propelled economic growth but current funding is not enough to ensure airports have the infrastructure they need to deal with massive increases in passengers and cargo

Principato 12**—** President of Airports Council International-North America, which represents local, regional and state governing bodies that own and operate commercial airports (Greg, “Why we should invest today in 'Airports Inc.'”, The Hill, 3/27/2012, <http://thehill.com/blogs/congress-blog/labor/218525-faa-why-we-should-invest-today-in-airports-inc>)//Bwang

**With the latest** Federal Aviation Administration (FAA) **forecast predicting a doubling of passengers and cargo by 2030, the current funding system is not up to the job** of ensuring airports will have the infrastructure they need to handle such dramatic increases in traffic. This will have far-reaching consequences. Commercial **airports are powerful economic engines, generating 10.5 million jobs and $1.2 trillion for the U.S. economy**, according to a new Airports Council International-North America study. Across the country, **workers and businesses count on local airports to attract investment and move people and goods around the world. Since 2001, the total number of jobs associated with airports has increased by more than 50 percent.** Despite unprecedented growth and clear evidence of the economic benefits of infrastructure investments, airports expect to have $80 billion in unmet needs through 2015 because of the flawed system used to pay for infrastructure projects. That has not always been the case. **Airports generated millions of jobs and trillions of dollars for local communities between 2001 and 2010 because President** Bill **Clinton and Congress made** two **decisions to improve airport infrastructure** planning and investment in 2000. The first decision allowed local communities to raise more money to finance airport improvements by giving them the authority to increase the passenger facility charge from $3 to $4.50. This helped meet local needs by expanding airport capacity to serve more passengers, handle more cargo, attract more air service and most important: promote business and commerce. The second decision **increased investments in the federal** Airport Improvement Program **(AIP)** so that the money users pay into the nation’s Airport and Airway Trust Fund could be reinvested into the system, including the airports where all of this economic activity begins and ends. The money for this comes from the aviation trust fund which is funded by users. **Growth in jobs and business activity took place because we made a national decision to invest in the future – the airports that serve as the economic hubs of our national aviation system**. The result is that in 2010, **airports were responsible for about 8 percent of U.S. gross domestic product and 7 percent of all U.S. jobs.** By any standard, that is a significant return on investment. Dollar for dollar, commercial **airports rate as a remarkably worthwhile infrastructure investment.** This is not news to other countries. Our international competitors recognize the benefits of modern airport infrastructure. That’s why they are building and expanding airports at a rapid pace (China alone is now building 12 to 15 new airports per year) to prepare for predicted growth in global travel and business. Unfortunately, we are retreating from these policy and investment decisions at just the wrong time. After five years, 23 extensions and a 14-day shutdown, Congress passed an FAA Reauthorization bill early this year that did not provide for any new funding for airports – the passenger facility charge ceiling was not raised and Airport Improvement Program funding was cut. Yet as the FAA data show, commercial **airports need to begin investing now in order to meet the long-term needs of the traveling public over the next two decades**. Commercial **airports must have new runways and terminals, and aging facilities must be upgraded. This requires long lead times** – as much as eight years – **to move through the planning and permitting process**. And don’t forget that **successful implementation of the future air traffic control system known as NextGen depends on airport infrastructure investment as well**. We need to grant power to our localities and allow them to raise their own revenues and restore the national investment in aviation infrastructure. **The answer to creating another two decades of good news is to ensure that** our commercial **airports are recognized as America’s economic engine – where job creation takes off.**

#### An increase in federal infrastructure investment is key to solve capacity problems at airports – a delay in investment will mean escalating costs in the future

Bennett 99 (Grant D., “Funding Airport Infrastructure: Federal Options for Solvency”, Journal of Engineering and Public Policy, August 5th, 1999, http://www.wise-intern.org/journal/1999/index.html)//IIN

Airport Infrastructure Cause and Effect When looking at investments in airports, consider that trends in commercial aviation growth are continuing. Both the FAA and the Airports Council International-North America reported that the 1998 enplanements increased by an average of 2.2%.1 The FAA long-term forecasts indicate that the enplanement rates are expected to increase by 3.4% annually over the next 12 years. This increase in traffic will continue to wear down infrastructure at a faster rate than current funding levels can support, and increase the demand for airport expansions. Congress, the President, voters, industry and airports need to know that funding must go towards infrastructure for the upkeep of air travel. The question remains as to how much and where that money is spent. Airport infrastructure includes runways, taxiways, aprons, terminals, noise abatements, land purchases and equipment for safety, emergency, and snow removal**.2** Development and improvement of this infrastructure could increase efficiency and reduce costs to airlines by reducing the delay time each aircraft experiences. The National Civil Aviation Review Commission, established by Congress, reported that negative effects from flight delay will soon lead to gridlock in aviation.3 By increasing funding, improved infrastructure would allow the airports to keep up with current trends in aviation growth. Terminal expansions would also support growth by helping to increase capacity and airline competition at an airport.4 Long term investment helps promote reliability in airports and economic stability in airport funding. A General Accounting Office (GAO) report from July 1998 suggests that if pavement rehabilitation projects are not performed in a timely manner, costs can escalate to 2 to 3 times over normal costs.5 This type of development issue brings short term versus long term investment strategies to the front of the funding debate. Long term funding reduces the cost to the overall system and promotes reliable resources for air travel. Federal Funding Insolvency The federal funding of airport infrastructure is made through the Airport Improvement Program (AIP). The AIP is appropriated money from the Aviation Trust Fund, which collects a combination of ticket and fuel taxes from the aviation community. Although there is $11.17 billion in the Trust Fund for fiscal year 1999, not all of that money is going to aviation.6 Approximately $3.41 billion from the Trust Fund will revert back to the federal government’s general fund and be spent outside of aviation. 7 This raises concern for future infrastructure investment, especially when the aviation community is growing. The American Society of Civil Engineers, along with many key players in the aviation field, support removing the Aviation Trust Fund from the federal government’s general fund.8 This would establish a direct link between taxes and investments in the aviation system and insure that dedicated user fees go toward their intended use. Infrastructure funding could then become proactive and grow as the aviation field grows. Scope Funding problems are the main priorities to address when looking at the future of airport infrastructure. Current political themes driving funding decisions obscure and ignore needed investments. Solutions involve funding options that link investment to airport demand for infrastructure. Only after long-term and dedicated investment is established can the internal FAA priorities on exact funding levels be addressed. Literature Review Airport Problems and Infrastructure Solutions The foreseeable future for airport infrastructure is grim. As growth in airline traffic continues, many experts predict that significantly higher spending will be needed for airport infrastructure. The National Civil Aviation Review Commission (NCARC) was established by Congress to review, in part, whether the Federal Aviation Administration (FAA) has the resources it needs to meet critical safety, security and operational activities, and to continue investing in airport capital development. The NCARC reports that the aviation field will soon feel dramatic effects from added flight delay**s.9** The effects of flight delays were quantified when the Air Transport Association reported that the delays in aviation cost carriers $2.4 billion in 1997**.**10 The FAA’s National Plan of Integrated Airport Systems (NPIAS) came to the same conclusions regarding added flight delays in the future. It describes the most problematic areas of aviation to be large numbers of people exposed to high noise levels and delays due to congestion.11 NPIAS helps the FAA to coordinate airport development, and includes some 3,344 airports that are “significant to national air transportation.” It estimates $35.1 billion is needed over the next 5 years to meet the need of all segments of commercial and general aviation. The NPIAS suggests major airfield improvements, together with enhanced technology, will be needed to solve the problem.12 Growth in passenger traffic requires increased infrastructure spending at airports. **The NPIAS says that** due to a 62% increase in passengers, more investment in terminals is necessary to accommodate this growth**.13 The national plan goes on to say that** developing new runways at large and medium hub airports will help to relieve the load. While mentioning alternative solutions like scheduling more flights for off-peak hours, it concludes that congestion pricing to force alternative scheduling will not substitute for capacity enhancement.14 An Aviation Week article states that trading frequency for capacity will not solve the problem. The article emphasizes that improvements like added runways, terminals and gates are the only solutions to the upcoming capacity problems.15 If investment does not occur now, costs will escalate in the future. The GAO reports that airfield pavement rehabilitation will cost 2 to 3 times more if airports wait to fix the problem.16

#### Economic problems in aviation spread globally due to interconnectedness of air transportation IATA, 2008

(International Air Transport Association, “Aviation Economic Benefits”, http://www.iata.org/SiteCollectionDocuments/890700\_Aviation\_Economic\_Benefits\_Summary\_Report.pdf) Megan

Global economic growth is a key driver of growth in air traffic demand. However, while air traffic demand has increased as economies have grown, **air transportation** itself **can be a key cause and facilitator of economic growth**. Not only is **the aviation industry** a major industry in its own right, employing large numbers of highly skilled workers, but more importantly it **is an essential input into the rapidly growing global economy**. Greater connections to **the global air transport network can boost the productivity and growth of economies** by providing better access to markets, enhancing links within and between businesses and providing greater access to resources and to international capital markets.

#### Economic collapse causes escalatory global conflicts

Mathew J. Burrows (counselor in the National Intelligence Council (NIC), PhD in European History from Cambridge University) and Jennifer Harris (a member of the NIC’s Long Range Analysis Unit) April 2009 “Revisiting the Future: Geopolitical Effects of the Financial Crisis” http://www.twq.com/09april/docs/09apr\_Burrows.pdf

Of course, the report encompasses more than economics and indeed believes the future is likely to be the result of a number of intersecting and interlocking forces. With so many possible permutations of outcomes, each with ample opportunity for unintended consequences, there is a growing sense of insecurity. Even so, history may be more instructive than ever. While we continue to believe that the Great Depression is not likely to be repeated, the lessons to be drawn from that period include the harmful effects on fledgling democracies and multiethnic societies (think Central Europe in 1920s and 1930s) and on the sustainability of multilateral institutions (think League of Nations in the same period). There is no reason to think that this would not be true in the twenty-first as much as in the twentieth century. For that reason, the ways in which the potential for greater conflict could grow would seem to be even more apt in a constantly volatile economic environment as they would be if change would be steadier. In surveying those risks, the report stressed the likelihood that terrorism and nonproliferation will remain priorities even as resource issues move up on the international agenda. Terrorism’s appeal will decline if economic growth continues in the Middle East and youth unemployment is reduced. For those terrorist groups that remain active in 2025, however, the diffusion of technologies and scientific knowledge will place some of the world’s most dangerous capabilities within their reach. Terrorist groups in 2025 will likely be a combination of descendants of long established groupsinheriting organizational structures, command and control processes, and training procedures necessary to conduct sophisticated attacksand newly emergent collections of the angry and disenfranchised that become self-radicalized, particularly in the absence of economic outlets that would become narrower in an economic downturn. The most dangerous casualty of any economically-induced drawdown **of U.S. military presence** would almost certainly be **the Middle East**. Although Iran’s acquisition of nuclear weapons is not inevitable, worries about a nuclear-armed Iran could lead states in the region to develop new security arrangements with external powers, acquire additional weapons, and consider pursuing their own nuclear ambitions. It is not clear that the type of stable deterrent relationship that existed between the great powers for most of the Cold War would emerge naturally in the Middle East with a nuclear Iran. Episodes of low intensity conflict and terrorism taking place under a nuclear umbrella could lead to an unintended escalation and broader conflict if clear red lines between those states involved are not well established. The close proximity of potential nuclear rivals combined with underdeveloped surveillance capabilities and mobile dual-capable Iranian missile systems also will produce inherent difficulties in achieving reliable indications and warning of an impending nuclear attack. The lack of strategic depth in neighboring states like Israel, short warning and missile flight times, and uncertainty of Iranian intentions may place more focus on preemption rather than defense, potentially leading to escalating crises Types of conflict that the world continues to experience, such as over resources, could reemerge, particularly if protectionism grows and there is a resort to neo-mercantilist practices. Perceptions of renewed energy scarcity will drive countries to take actions to assure their future access to energy supplies. In the worst case, this could result in interstate conflicts if government leaders deem assured access to energy resources, for example, to be essential for maintaining domestic stability and the survival of their regime. Even actions short of war, however, will have important geopolitical implications. Maritime security concerns are providing a rationale for naval buildups and modernization efforts, such as China’s and India’s development of blue water naval capabilities. If the fiscal stimulus focus for these countries indeed turns inward, one of the most obvious funding targets may be military. Buildup of regional naval capabilities could lead to increased tensions, rivalries, and counterbalancing moves, but it also will create opportunities for multinational cooperation in protecting critical sea lanes. With water also becoming scarcer in Asia and the Middle East, cooperation to manage changing water resources is likely to be increasingly difficult both within and between states in a more dog-eat-dog world.

# 1AC Terrorism Advantage

#### Currently security at small general aviation airports is practically nonexistent making them prime targets for terrorism – empirically proven

**Elias, 2009**(Bart, specialist in aviation policy, Federation of American Scientists, “Securing General Aviation”, March 3, http://www.fas.org/sgp/crs/homesec/RL33194.pdf) Megan

**Some media reports have raised significant concerns over what has been described as “practically nonexistent” security at many small general aviation** (GA) **airports**.19 GA advocates have countered that small general aviation aircraft do not pose a significant threat and point out that many GA airports have taken reasonable steps, largely on their own initiative, to enhance security.20 However, **security concerns remain and a few high-profile incidents pointing to vulnerabilities in GA security have attracted considerable attention and raised concerns among some policymakers and security experts**. In the first of these high-profile incidents following the terrorist attacks of September 11, 2001, **a student pilot intentionally crashed a small single-engine airplane into a skyscraper in** **downtown Tampa, Florida on January 5, 2002.** **The pilot**, described as a troubled youth, reportedly **had expressed support for** Osama **bin Laden and the 9/11** terrorist attacks, but acted alone and had no known ties to any terrorist groups.21 More recently, **on July 22, 2005, a small ultralight crashed near the German parliament building** and Chancellor’s office in Berlin in what was described by German air traffic control officials as a suspected suicide.22 **The crash** prompted German officials to establish a no-fly zone over central Berlin and again **raised concerns in the U**nited **S**tates **over protecting key assets from possible attacks using GA aircraft as this incident occurred just over two months after a high-profile breach of the protected airspace around Washington, DC**, by an unauthorized single-engine airplane that prompted evacuations of the White House and the U.S. Capitol.23 On October 11, 2006, the accidental crash of a small single-engine plane, piloted by New York Yankees pitcher Corey Lidle, into a New York City high-rise condominium—killing Lidle and his flight instructor and severely injuring one building occupant—renewed post-9/11 concerns over the safety and security of GA flights operated in closed proximity to major population centers. Following the crash, the FAA took action by restricting aircraft access to the East River corridor, a narrow wedge of airspace between Manhattan and Brooklyn where GA flights had been permitted at low altitudes, mostly on the grounds of safety rather than for security reasons. However, following the crash, some policymakers resounded their calls for enhanced security measures, such as GA flight restrictions, in the vicinity of New York City.24 While these various incidents have received significant attention given the focus on aviation security following the attacks of September 11, 2001, **GA aircraft have been used maliciously in earlier incidents**. Most notably, in the early morning of **September 12, 1994, a suicidal individual** with a history of mental illness, reportedly despondent over personal and business problems, **intentionally crashed a stolen small single-engine airplane on the south lawn of the White House**.25 While the airplane was completely destroyed and the perpetrator was killed in the crash, property damage was minimal and the incident posed no threat to those in the White House.

#### Terrorists will use GA aircraft for CBW or nuclear attacks

**Elias, 2009**(Bart, specialist in aviation policy, Federation of American Scientists, “Securing General Aviation”, March 3, http://www.fas.org/sgp/crs/homesec/RL33194.pdf) Megan

While none of the events discussed above has been linked to terrorism, some limited **intelligence info**rmation that has been made public **suggests a continued terrorist interest in using GA aircraft to carry out attacks** both domestically and overseas. For example, **a crop duster pilot in Florida identified 9/11 suicide hijacker Mohammed Atta as an individual who had approached him in early 2001** inquiring about the purchase and operation of crop duster aircraft.32 Similarly, **U.S. authorities presented evidence that Zacharias Moussaoui**—who was arrested prior to the 9/11 attacks after raising suspicions surrounding his desire to train in large aircraft simulators and pleaded guilty to conspiring with the 9/11 hijackers—**made similar inquiries** about starting a crop- dusting company while living in Norman, Oklahoma. Evidence was also presented that Moussaoui was in possession of a computer disk containing information regarding the aerial application of pesticides.33 **This** evidence **raised concerns at the** Central Intelligence Agency (**CIA) that al Qaeda has “considered using aircraft to disseminate [biological** warfare] **agents.**”34 The CIA also suggested that, **in initially planning the 9/11 attacks, one of** Osama **bin Laden’s associates proposed that the World Trade Center be targeted by small aircraft packed with explosives**, but bin Laden himself altered the plan to use large commercial jets instead.35 If true, this suggests that terrorists engaged in some deliberative process of weighing the pros and cons of using small general aviation aircraft as compared to commercial airlines in planning the 9/11 attacks. While the terrorists favored commercial aircraft in carrying out their attack on September 11, 2001, **in the post-9/11 environment, heightened security measures at commercial airports could make GA assets considerably more attractive to terrorists than in the past**. While it is unlikely that small GA aircraft packed with conventional explosives could cause the amount of destruction inflicted on September 11, 2001, large jet aircraft in the GA fleet or **smaller aircraft carrying chemical, biological, radiological, or nuclear** (CBRN) **weapons** may **pose a more formidable threat**. Although no publically available intelligence on terrorist operations since September 11, 2001, has indicated any specific threat involving GA aircraft domestically, evidence indicates that al Qaeda has maintained a continued interest in using small aircraft to attack U.S. interests overseas. For example, on April 29, 2003, Pakistani authorities apprehended Waleed bin Attash (a.k.a., Khallad, Tawfiq bin Attash), the suspected mastermind of the U.S.S. Cole bombing and a known associate of the 9/11 hijackers, and five other suspected al Qaeda operatives in Karachi, Pakistan. Soon after the arrests, authorities uncovered a plot to crash a small, explosives-laden airplane into the United States consulate office in Karachi illustrating al Qaeda’s continued interest in using aircraft to attack U.S. assets.36 The DHS subsequently issued a security advisory indicating that al Qaeda was planning to use GA aircraft to attack warships in the Persian Gulf as well as the U.S. Consulate in Karachi, Pakistan.

#### One bioterror attack with a crop dusting plane could kill more than WWII and would tank the economy Commission on the Prevention of WMD, 2009 (Commission on the Prevention of Weapons of Mass Destruction, Proliferation & Terrorism, “The Clock is Ticking”, October 21, http://www.pharmathene.com/CPWMD\_Interim\_Report.pdf) Megan

**The threat of bioterrorism is real.** In December 2008, **the Commission concluded that terrorists are more likely to be able to obtain and use a biological weapon than a nuclear weapon. This finding is not singular: In recent years, the United States has received strategic warnings of biological weapons use from dozens of government reports and expert panels. The consequences of ignoring these warnings could be dire.** For example, one recent study from the intelligence community projected that **a one- to two-kilogram release of anthrax spores from a crop duster plane could kill more Americans than died in World War II. Clean-up and other economic costs could exceed $1.8 trillion**.

#### And, terrorism escalates to nuclear war

Robert **Ayson,** Professor of Strategic Studies and Director of the Centre for Strategic Studies: New Zealand at the Victoria University of Wellington, **2010** (“After a Terrorist Nuclear Attack: Envisaging Catalytic Effects,” Studies in Conflict & Terrorism, Volume 33, Issue 7, July, Available Online to Subscribing Institutions via InformaWorld)

A terrorist nuclear attack, and even the use of nuclear weapons in response by the country attacked in the first place, would not necessarily represent the worst of the nuclear worlds imaginable. Indeed, there are reasons to wonder whether nuclear terrorism should ever be regarded as belonging in the category of truly existential threats. A contrast can be drawn here with the global catastrophe that would come from a massive nuclear exchange between two or more of the sovereign states that possess these weapons in significant numbers. Even the worst terrorism that the twenty-first century might bring would fade into insignificance alongside considerations of what a general nuclear war would have wrought in the Cold War period. And it must be admitted that as long as the major nuclear weapons states have hundreds and even thousands of nuclear weapons at their disposal, there is always the possibility of a truly awful nuclear exchange taking place precipitated entirely by state possessors themselves. But these two nuclear worlds—a non-state actor nuclear attack and a catastrophic interstate nuclear exchange—are not necessarily separable. It is just possible that **some sort of terrorist attack, and especially an act of nuclear terrorism, could precipitate a chain of events leading to a massive exchange of nuclear weapons** between two or more of the states that possess them. In this context, today’s and tomorrow’s terrorist groups might assume the place allotted during the early Cold War years to new state possessors of small nuclear arsenals who were seen as raising the risks of a catalytic nuclear war between the superpowers started by third parties. These risks were considered in the late 1950s and early 1960s as concerns grew about nuclear proliferation, the so-called n+1 problem. It may require a considerable amount of imagination to depict an especially plausible situation where an act of nuclear terrorism could lead to such a massive inter-state nuclear war. For example, in the event of a terrorist nuclear attack on the United States, it might well be wondered just how Russia and/or China could plausibly be brought into the picture, not least because they seem unlikely to be fingered as the most obvious state sponsors or encouragers of terrorist groups. They would seem far too responsible to be involved in supporting that sort of terrorist behavior that could just as easily threaten them as well. Some possibilities, however remote, do suggest themselves. For example, how might the United States react if it was thought or discovered that the fissile material used in the act of nuclear terrorism had come from Russian stocks,40 and if for some reason Moscow denied any responsibility for nuclear laxity? The correct attribution of that nuclear material to a particular country might not be a case of science fiction given the observation by Michael May et al. that while the debris resulting from a nuclear explosion would be “spread over a wide area in tiny fragments, its radioactivity makes it detectable, identifiable and collectable, and a wealth of information can be obtained from its analysis: the efficiency of the explosion, the materials used and, most important … some indication of where the nuclear material came from.”41 Alternatively, **if the act of nuclear terrorism came as a complete surprise**, and American officials refused to believe that a terrorist group was fully responsible (or responsible at all) **suspicion would shift immediately to state possessors. Ruling out Western ally countries** like the United Kingdom and France, and probably Israel and India as well, authorities in **Washington would be left with a very short list consisting of North Korea, perhaps Iran** if its program continues, **and possibly Pakistan. But at what stage would Russia and China be definitely ruled out in this high stakes game** of nuclear Cluedo? In particular, **if the act of nuclear terrorism occurred against a backdrop of existing tension in Washington’s relations with Russia and/or China, and at a time when threats had already been traded between these major powers, would officials and political leaders not be tempted to assume the worst?** Of course, the chances of this occurring would only seem to increase if the United States was already involved in some sort of limited armed conflict with Russia and/or China, or if they were confronting each other from a distance in a proxy war, as unlikely as these developments may seem at the present time. The reverse might well apply too: should a nuclear terrorist attack occur in Russia or China during a period of heightened tension or even limited conflict with the United States, could Moscow and Beijing resist the pressures that might rise domestically to consider the United States as a possible perpetrator or encourager of the attack? **Washington’s early response to a terrorist nuclear attack** on its own soil **might** also **raise the possibility of** an unwanted (and nuclear aided) **confrontation** with Russia and/or China. For example, **in the noise and confusion during the immediate aftermath** of the terrorist nuclear attack, **the U.S. president might be expected to place the country’s armed forces, including its nuclear arsenal, on a higher stage of alert. In such a tense environment**, when careful planning runs up against the friction of reality, **it is just possible that Moscow and/or China might mistakenly read this as a sign of U.S. intentions to use force** (and possibly nuclear force) against them. In that situation, **the temptations to preempt such actions might grow**, although it must be admitted that any preemption would probably still meet with a devastating response. As part of its initial response to the act of nuclear terrorism (as discussed earlier) **Washington might decide to order a significant conventional (or nuclear) retaliatory or disarming attack against the leadership of the terrorist group and/or states seen to support that group**. Depending on the identity and especially the location of these targets, **Russia and/or China might interpret such action as being far too close for their comfort, and potentially as an infringement on their spheres of influence and even on their sovereignty**. One far-fetched but perhaps not impossible scenario might stem from a judgment in Washington that some of the main aiders and abetters of the terrorist action resided somewhere such as Chechnya, perhaps in connection with what Allison claims is the “Chechen insurgents’ … long-standing interest in all things nuclear.”42 American pressure on that part of the world would almost certainly raise alarms in Moscow that might require a degree of advanced consultation from Washington that the latter found itself unable or unwilling to provide. There is also the question of how other nuclear-armed states respond to the act of nuclear terrorism on another member of that special club. It could reasonably be expected that following a nuclear terrorist attack on the United States, both Russia and China would extend immediate sympathy and support to Washington and would work alongside the United States in the Security Council. But there is just a chance, albeit a slim one, where the support of Russia and/or China is less automatic in some cases than in others. For example, what would happen if the United States wished to discuss its right to retaliate against groups based in their territory? If, for some reason, Washington found the responses of Russia and China deeply underwhelming, (neither “for us or against us”) might it also suspect that they secretly were in cahoots with the group, increasing (again perhaps ever so slightly) the chances of a major exchange. If the terrorist group had some connections to groups in Russia and China, or existed in areas of the world over which Russia and China held sway, and if Washington felt that Moscow or Beijing were placing a curiously modest level of pressure on them, what conclusions might it then draw about their culpability? If Washington decided to use, or decided to threaten the use of, nuclear weapons, the responses of Russia and China would be crucial to the chances of avoiding a more serious nuclear exchange. They might surmise, for example, that while the act of nuclear terrorism was especially heinous and demanded a strong response, the response simply had to remain below the nuclear threshold. It would be one thing for a non-state actor to have broken the nuclear use taboo, but an entirely different thing for a state actor, and indeed the leading state in the international system, to do so. If Russia and China felt sufficiently strongly about that prospect, there is then the question of what options would lie open to them to dissuade the United States from such action: and as has been seen over the last several decades, the central dissuader of the use of nuclear weapons by states has been the threat of nuclear retaliation. If some readers find this simply too fanciful, and perhaps even offensive to contemplate, it may be informative to reverse the tables. Russia, which possesses an arsenal of thousands of nuclear warheads and that has been one of the two most important trustees of the non-use taboo, is subjected to an attack of nuclear terrorism. In response, Moscow places its nuclear forces very visibly on a higher state of alert and declares that it is considering the use of nuclear retaliation against the group and any of its state supporters. How would Washington view such a possibility? Would it really be keen to support Russia’s use of nuclear weapons, including outside Russia’s traditional sphere of influence? And if not, which seems quite plausible, what options would Washington have to communicate that displeasure? If China had been the victim of the nuclear terrorism and seemed likely to retaliate in kind, would the United States and Russia be happy to sit back and let this occur? In the charged atmosphere immediately after a nuclear terrorist attack, how would the attacked country respond to pressure from other major nuclear powers not to respond in kind? The phrase “how dare they tell us what to do” immediately springs to mind. Some might even go so far as to interpret this concern as a tacit form of sympathy or support for the terrorists. This might not help the chances of nuclear restraint.

#### Funding AIP is key to address internal tradeoffs that have gutted security projects – current fee revenues are insufficient

**Kirk 09** – Specialist in Transportation Policy for the Congressional Research Service (Robert S. Kirk, “Airport Improvement Program (AIP) Reauthorization Issues for Congress”, Congressional research service, May 29, 2009, http://www.fas.org/sgp/crs/misc/R40608.pdf)//MSO

Prior to the passage of Vision 100, the AIP was the main source of federal grants for airport security capital projects. **In the years preceding** the **9/11** terrorist attacks, however, **security projects only amounted to about 2% of AIP’s total project spending**. In FY2002, following the 9/11 terrorist attacks, the spending of AIP funds for security projects expanded to 17% of the amounts made available for AIP grants for that year ($561 million of the $3.2 billion of amounts made available). **As the AIP funding of security projects grew there was a proportional decline of AIP resources dedicated to non-security projects. There were concerns among AIP supporters that the program’s traditional priorities of enhancing capacity, safety, and noise mitigation were in danger of being underfunded**. Vision 100 made two major changes regarding the funding of airport security projects. First, the act included a provision that repealed the language of the Federal Aviation Reauthorization Act of 1996 (P.L. 104-264) that permitted the use of AIP and PFC funds for security-related improvement of facilities and the purchase or deployment of equipment for security purposes. Second, Vision 100 established the Aviation Security Capital Fund to fund airport security related projects. Together, these provisions were expected to relieve the AIP of the demands on its funds for most security projects. **The aviation security fee revenues credited to the fund, however, have been insufficient to fully fund security costs**. Consequently, despite the Vision 100 prohibition, some still view AIP as a potential source of funding for certain security-related airport improvements in the future. **The use of AIP grants for security purposes could reemerge as an issue** during FAA reauthorization.

# 1AC Environment Advantage

#### Despite airlines being a top contributor to emissions, the air transport industry is behind in reducing carbon because of infrastructure costs

**Kivitis, Charles and Ryan, 2009** - Graduate College of Management, Southern Cross University, Tweed Gold Coast, Australia Pro Vice-Chancellor (Research), Southern Cross University, Tweed Gold Coast, Australia (Robbert, Michael, Neal, “A Post-Carbon Aviation Future:

Airports and the Transition to a Cleaner Aviation Sector”, Southern Cross University, November 10, 2009, <http://www.airportmetropolis.qut.edu.au/publications/documents/Kivits_et_al__Post_carbon_aviation_future_doc.pdf> //GKoo

**It is likely that air transport will be the slowest of all the major transport modes to adapt to a carbon-constrained future**. The widely-anticipated advent of peak oil, as discussed by Charles et al. [1] and Moriarty and Honnery [3], will be of especial significance since the current generation of airliners rely on high-octane aviation gasoline, known as Jet-A fuel [4]. It is expected that conventional aviation fuel will become increasingly expensive, the current global market correction of oil prices notwithstanding, thereby reducing growth in the sector and marginalizing the use of air transport for anything other than low-weight/high-value items and passenger transport [5]. Furthermore, the introduction of emissions trading schemes (ETS) that include transport, and air transport in particular, are likely to also impact heavily on the sector, mainly on account of the petroleum-based fuel used to power current turbine-engined aircraft. **Airlines are widely regarded as substantial contributors to global carbon pollution and reportedly contribute 3 to 5% of global CO2 emissions** [6-8]. **CO2 emissions of aircraft are also worse than CO2 emissions from other sources because they are emitted at higher altitudes** [7]. Although the EU has not yet included air transport in its cap-and-trade ETS, it is likely to be included in the future [9]. Other proposed emission trading schemes, such as that outlined in the Carbon Pollution Reduction Scheme (CPRS) White Paper released by the Australian Government in late 2008, includes the aviation industry in the nation’s forthcoming emissions trading scheme [10], now due to commence in July 2011. 3 **One of the most significant factors contributing to the relative inability of the air transport sector to adapt to the changing transport and energy policy environment is the enormous costs involved in the research and development** (R&D) activities conducted by airline and engine manufacturers, in addition to the established diarchy between Boeing and Airbus Industry [11]. In particular, long product lifecycles and **huge sunk costs are major barriers for technological change** [12]. **Authors often refer to the sunk costs of any major infrastructure program and the enormous financial difficulty of changing track once substantial outlay has been made** [13,14]. For example, it could potentially take Airbus Industries roughly twenty years to make a profit on the new Airbus A380 [15]. Given that the A380’s airframe is designed to be propelled by conventional turbine engines, the short-term potential for alternative technology to be used in modern airlines is limited, save for the use of aviation fuel derived from biofuels. At present, it would make little business sense for Airbus and Boeing to shift rapidly to a new technological paradigm. This is because recently launched projects such as the aforementioned A380 and the Boeing 787 Dreamliner still have a long way to go before they have paid for themselves, let alone generate an acceptable profit.

#### Air pollution from the aviation industry leads to climate change, ocean acidification and loss of biodiversity

**Kol, 2012 –** Writer for the New Straits Times (Goh, “Aviation Impact on the Environment”, New Strait Times, February 16, 2012, <http://www.nst.com.my/channels/niexter/aviation-impact-on-environment-1.47093?localLinksEnabled=false> //GKoo

The contrail from an **aircraft** engine is formed by the combustion of precious fuels that **release harmful carbon dioxide and greenhouse gases into our atmosphere.** This is **bound to accelerate global warming and ocean acidification**. With global warming on the rise, warmer water in the ocean is causing tropical storms. **Droughts and wildfires will also become worse, and so will the intensity of rainstorms. Ocean acidification leads to marine-life destruction. Reef-forming corals that are home to vulnerable sea-dwellers, algae and phytoplankton – the very fundamentals of the oceanic food web** **– will become useless** due to their inability to adapt to small changes in pH. In a nutshell, **the climate changes and air pollution caused by the aviation industry pose a danger to the balance of Earth’s biodiversity.**

#### Climate change results in every major impact – ecological catastrophe, famine, drought, resource wars and nuclear war

**Pfeiffer 04** - Geologist (Dale, “Global Climate Change & Peak Oil”, The Wilderness Publications, http://www.fromthewilderness.com/free/ww3/072004\_global\_climate3.shtml)//JS

But the real importance of the report lies in the statement of probability and in the authors' recommendations to the President and the National Security Council. While no statistical analysis of probability is given in the report as it has been released (any such statistical analysis would most likely be classified), the authors state that “**the plausibility of severe and rapid climate change is higher than most of the scientific community and perhaps all of the political community is prepared for**.”6 They say that **instead of asking whether this could happen, we should be asking when this will happen**. They conclude: “It is quite plausible that **within a decade the evidence of an imminent abrupt climate shift may become clear and reliable**.”7 From such a shift, the report claims, utterly **appalling ecological consequences would follow. Europe and Eastern North America would plunge into a mini-ice age,** with weather patterns resembling present day Siberia. **Violent storms could wreak havoc around the globe. Coastal areas** such as The Netherlands, New York, and the West coast of North America **could become uninhabitable, while most island nations could be completely submerged**. Lowlands like Bangladesh could be permanently swamped. While flooding would become the rule along coastlines, mega-droughts could destroy the world's breadbaskets. The dust bowl could return to America's Midwest. **Famine and drought would result in a major drop in the planet's ability to sustain the present human population. Access to water could become a major battleground – hundreds of millions could die as a result of famine and resource wars.** More than 400 million people in subtropical regions will be put at grave risk. There would be mass migrations of climate refugees, particularly to southern Europe and North America. **Nuclear arms proliferation in conjunction with resource wars could very well lead to nuclear wars**.8 And none of this takes into account the effects of global peak oil and the North American natural gas cliff. Not pretty.

#### Funding AIP results in more airports undertaking green projects

**Dillingham, 08** - Director of Civil Aviation Issues at U.S. Government Accountability Office (Gerald, “Aviation and the Environment: Initial Voluntary Airport Low Emissions Program Projects Reduce Emissions, and FAA Plans to Assess the Program's Overall Performance as Participation Increases,” United States Government Accountability Office Monograph, Nov. 08, http://www.gao.gov/products/A84715)//JS

*\*VALE = Voluntary Airport Low Emissions*

While **the number of airports that have undertaken VALE projects is relatively small compared with the number of eligible airports**, **the number of participants in the program is increasing,** as are the range and scope of projects being conducted and the amount of money spent on them. **As of September 2008, 9 of the 160 airports that were eligible had or were planning to initiate a VALE project**, which is up from 2 participating airports in VALE's initial year of operation in 2005. FAA expects participation in VALE to increase as more airports become familiar with the program. Although FAA may be correct in its assumption about participation, officials GAO interviewed from 4 nonparticipating airports, and others, such as representatives of airport associations, indicated various reasons for airports not wanting to participate in **the program**, which **is funded through** the same sources of funds--**AIP grants** or PFCs--as other airport development projects. One reason is that some airports have a misperception that VALE projects compete with other projects, such as runways or terminals, for AIP funding. According to FAA officials, this is usually not the case because VALE projects are funded through a discretionary AIP **set-aside for noise and emission projects**. FAA officials want to increase FAA's outreach to airports regarding VALE, but noted that the regional staff who are responsible for outreach have limited time for this purpose. **VALE projects have ranged from airports' purchase of fuel-efficient vehicles to projects that help decrease aircraft ground emissions**. Expenditures for the VALE program have been nearly $20 million for 20 projects through fiscal year 2008 (with 56 percent of these expenditures occurring in fiscal year 2008). **All participating airports have used AIP grants to fund VALE projects for various reasons, mainly because their PFCs have already been committed for high-priority, large-scale terminal improvement projects that may not be eligible for any type of AIP grants**. FAA has yet to assess the outcomes and overall performance of the VALE program. However, **VALE projects are expected to reduce emissions at participating airports**, and two airports have taken advantage of the program to obtain emission credits for planned construction projects. According to FAA data, the VALE projects initiated to date will reduce emissions of such pollutants as nitrogen oxide and carbon monoxide **by over 5,700 tons estimated over the projects' lifetime,** which range from 10 to 40 years. According to FAA, the emission reductions resulting from VALE projects, although large in some cases, such as equipping gates with electricity and air conditioning outlets for aircraft, represent a small fraction of total emissions at participating airports. FAA plans to assess the overall performance of the VALE program as participation increases. FAA officials have begun developing cost-effectiveness measures, such as the amount of emission reductions per dollar spent. FAA officials stated that based on the number and size of VALE projects funded to date, they believe more history and experience with the program is needed before the agency develops other performance measures, such as setting goals for the number of VALE projects.

# Inherency

#### A new FAA bill cut AIP crippling all airport infrastructure

**Principato 12—** President of Airports Council International-North America, which represents local, regional and state governing bodies that own and operate commercial airports (Greg, “Why we should invest today in 'Airports Inc.'”, The Hill, 3/27/2012, <http://thehill.com/blogs/congress-blog/labor/218525-faa-why-we-should-invest-today-in-airports-inc>)//Bwang

With **the latest** Federal Aviation Administration (**FAA**) forecast **predict**ing **a doubling of passengers and cargo by 2030, the current funding system is not up to the job of ensuring airports will have the infrastructure they need** to handle such dramatic increases in traffic. This will have far-reaching consequences. Commercial airports are powerful economic engines, generating 10.5 million jobs and $1.2 trillion for the U.S. economy, according to a new Airports Council International-North America study. Across the country, workers and businesses count on local airports to attract investment and move people and goods around the world. Since 2001, the total number of jobs associated with airports has increased by more than 50 percent. Despite unprecedented growth and clear evidence of the economic benefits of infrastructure investments, **airports expect to have $80 billion in unmet needs through 2015 because of the flawed system used to pay for infrastructure projects**. That has not always been the case. Airports generated millions of jobs and trillions of dollars for local communities between 2001 and 2010 because President Bill Clinton and Congress made two decisions to improve airport infrastructure planning and investment in 2000. The first decision allowed local communities to raise more money to finance airport improvements by giving them the authority to increase the passenger facility charge from $3 to $4.50. This helped meet local needs by expanding airport capacity to serve more passengers, handle more cargo, attract more air service and most important: promote business and commerce. The second decision increased investments in the federal Airport Improvement Program (AIP) so that the money users pay into the nation’s Airport and Airway Trust Fund could be reinvested into the system, including the airports where all of this economic activity begins and ends. The money for this comes from the aviation trust fund which is funded by users. Growth in jobs and business activity took place because we made a national decision to invest in the future – the airports that serve as the economic hubs of our national aviation system. The result is that in 2010, airports were responsible for about 8 percent of U.S. gross domestic product and 7 percent of all U.S. jobs. By any standard, that is a significant return on investment. Dollar for dollar, commercial airports rate as a remarkably worthwhile infrastructure investment. This is not news to other countries. Our international competitors recognize the benefits of modern airport infrastructure. That’s why they are building and expanding airports at a rapid pace (China alone is now building 12 to 15 new airports per year) to prepare for predicted growth in global travel and business. Unfortunately, **we are retreating from these policy and investment decisions at just the wrong time.** After five years, 23 extensions and a 14-day shutdown, **Congress passed an FAA Reauthorization bill** early this year **that did not provide for any new funding** **for airports** – the passenger facility charge ceiling was not raised and **A**irport **I**mprovement **P**rogram **funding was cut**. Yet as the FAA data show, **commercial airports need to begin investing now in order to meet the long-term needs of the traveling public over the next two decades**. Commercial **airports must have new runways and terminals, and aging facilities must be upgraded**. This requires long lead times – as much as eight years – to move through the planning and permitting process. And don’t forget that **successful implementation of the future air traffic control system known as NextGen depends on airport infrastructure investment** as well. We need to grant power to our localities and allow them to raise their own revenues and restore the national investment in aviation infrastructure. The answer to creating another two decades of good news is to ensure that our commercial airports are recognized as America’s economic engine – where job creation takes off.

#### The 2013 transportation budget deprioritizes funding for the Airport Improvement Program

U.S. Department of Transportation, 2012

(“Budget Highlights: Fiscal Year 2013”, no date, http://www.dot.gov/budget/2013/dot\_budget\_highlights\_fy\_2013.pdf) Megan

The President is requesting $15.2 billion for FY 2013, a decrease of $730 million from the FY 2012 enacted level. This overall decrease is due largely to the proposed reduction to the funding level for the Grants-in-Aid for Airports program. Major program highlights of the FAA’s budget request include: Operations: The President is requesting $9.7 billion for the operation, maintenance, com- munications, and logistical support of the air traffic control and air navigation systems. This represents an increase of just 0.7 per- cent from the FY 2012 enacted level. » Included in the Operations budget is a $10 million increase for Performance Based Navigation (PBN). This funding will stream- line the development and deployment of navigation procedures used at our nation’s busiest airports. » In support of the President’s Campaign to Cut Waste, the budget assumes a total of $114 million in new administrative cost efficiencies that will be achieved in the areas of travel, information technology, printing, contracts, supplies, and equipment. Facilities and Equipment (F&E): The President is requesting $2.8 billion for Facilities and Equipment, which will enable FAA to meet the challenge of both maintain- ing the capacity and safety of the current National Airspace while keeping a compre- hensive modernization and transformation effort on track. » Within these funds, the FY 2013 Budget requests $955 million for NextGen, an increase of $92 million (11 percent) over FY 2012 enacted levels. This funding will enable FAA to continue its ongoing mod- ernization efforts. Examples of specific projects include: » Area Navigation/Required Navigation Performance: $36 million is requested—a $7 million increase over FY 2012 enacted levels—to consolidate databases used to improve and develop new arrival and departure procedures. » Automatic Dependent Surveillance Broadcast: $272 million is requested for the implementation of satellite-based surveillance capabilities. This will provide a more complete picture of airspace conditions and more accurate position data. » Air-to-Ground Data Communications: $143 million is requested to implement a text-based data communication system. » NextGen Systems Development: $61 million is requested to conduct system level engineering reviews of human fac- tors, safety, environment, wake turbu- lence, future Air Traffic Control (ATC) communications and surveillance requirements. » Flexible Terminals and Airports: $31 mil- lion is requested to develop technologies and decision support tools to improve operations in the terminal environment and ensure efficient separation management. » Future Facilities: $95 million is requested to begin implementation of the first technologically advanced air traffic control center that will facilitate the transition to NextGen performance based operations. » The balance of the F&E request, $1.9 billion, will be used to sustain current systems, including maintaining aging infrastructure, power systems, information technology, navigational aids, communications, surveil- lance, and weather systems, as well as En Route Automation Modernization (ERAM). Research, Engineering and Development: The President is requesting $180 million for Research, Engineering, & Development in FY 2013 to support the continuation of work in both NextGen and other research areas such as environmental research, safety research in areas such as fire research, pro- pulsion and fuel systems, unmanned aircraft, advanced materials research, and weather research. » The President’s Budget requests $12 mil- lion for the Joint Planning and Development Office (JPDO) to ensure the efficient coordination between all Federal partners whose decisions impact NextGen. The JPDO facilitates collaboration with the Federal partners (including FAA, DOC, DOD, DHS and NASA) in order to best prioritize multi-agency concerns in the development of NextGen, including the integration of Unmanned Aircraft Systems (UAS) into the National Airspace System (NAS).»Grants-in-Aid for Airports (AIP): The budget requests a $2.4 billion obligation limitation for AIP, a decrease of $926 million from the FY 2012 enacted level. The budget proposes to focus Federal grants to support smaller commercial and general aviation airports that do not have access to additional revenue or other out- side sources of capital. Cont…» Grants-in-Aid to Airports will use most of the $2 billion for runway construction and other airport improvements aimed at increasing overall system efficiency in the future. The funds will also be used to honor existing long-term funding commitments, Runway Safety Area improvement projects, and for noise mitigation projects.

#### **2013 budget proposes cuts in funding for large and medium airports**

U.S. Department of Transportation, 2012  
(“Budget Estimates Fiscal Year 2013”, no date, Federal Aviation Administration, http://www.dot.gov/budget/2013/faa\_%20fy\_%202013\_budget\_estimate.pdf) Megan

Grants-in-Aid for Airports **Airports remain a critical part of the aviation system infrastructure.** Our FY 2013 request provides the funding needed to ensure safety, capacity, and efficiency at our nation’s airports through a combination of grant funding and an increase in Passenger Facility Charges (PFCs). Our $2.4 billion request supports our continued focus on safety- related development projects, including runway safety area improvements, runway incursion reduction, aviation safety management, and improving infrastructure conditions. **The FY 2013 Budget proposes to lower funding for the ongoing airport grants to $2.4 billion by eliminating guaranteed funding for large and medium hub airports.** This proposal is consistent with the recommendation of the President's National Commission on Fiscal Responsibility and Reform. To assist the airports that need the most help, the budget continues to support smaller commercial and general aviation airports that do not have access to additional revenue or other sources of capital. At the same time, our proposal allows larger airports to increase non-Federal Passenger Facility Charges (PFC) that provides them with greater flexibility to generate their own revenue. The Budget provides $103 million for Personnel & Related Expenses – an increase of $2 million over the FY 2012 enacted level to cover annualization of new hires. The budget also provides $29.3 million for Airport Technology Research to support enhanced safety and pavement research efforts and conduct noise studies. In addition, the budget provides $15 million for Airport Cooperative Research.

#### Need for AIP funding far exceeds existing grants **Principato,** President of Airports Council International-North America, **2011** (Greg, letter to Ray LaHood, Secretary of Department of Transportation, August 22, http://www.aci-na.org/sites/default/files/lahood\_budget\_letter\_822.pdf) Megan

AIP clearly meets the criteria of “investing in those areas critical to job creation and economic growth” discussed in Office of Management and Budget Director Lew’s August 17 memo. In fact, I would encourage you to identify AIP as a “priority investment” given the program’s excellent track record over the last two years in spurring economic growth and creating jobs in large and small communities. **According to both FAA and industry studies, the need for AIP far exceeds existing grants, therefore any proposed reductions to AIP funding will mean significant delays for vital safety, security and modernization projects, negatively impacting the traveling public and ultimately our national economy**.

#### Funding for the AIP is being cut now

**Glazier 12** (Works for @TheBondBuyer in Washington, D.C.,Kyle Glazier**,** FAA Authorization Bill Gets Final Approval, February 7, 2012**,** Lexis) LP

**Allowing local communities the flexibility to meet** their safety, **security and passenger needs benefits the** entire **aviation system**.” **The** final **bill** also **includes a cut to the** airport improvement program, a **discretionary fund administered by the D**epartment **o**f **T**ransportation **to fund** runway construction and other **improvements at public-use airports. It funds the AIP at $3.35 billion** for fiscal 2012, **down from** the $4 billion suggested in the Senate bill and **the $3.5 billion the program has gotten each year since 2006**. It was however, $350 million more than the level in the first House-approved measure. "**Congress missed an opportunity** by failing to accept the AIP funding levels provided in the Senate passed bill, which would have helped improve the infrastructure that serves as the backbone of the aviation system.

#### AIP at risk, new funding needed to survive

CAPA, 2011 – International Centre For Aviation (“Time to rethink US airport funding, CAPA, 10/18/2011, http://www.centreforaviation.com/analysis/time-to-rethink-us-airport-funding-60733)//MSO

Recently, Airport Investor Monthly posed the question “Is management outsourcing the answer to the growing need for privately-run airport operational activities in the United States?” On a similar theme, Bob Poole, Director of Transportation Policy at the Reason Foundation in the argues that given the impending collision between reduced federal funding and large unmet airport investment needs, it is high time to deregulate airports. **Growing political concern about the fiscal condition of the federal government has prompted a flurry of activity by airports, calling for a fundamental rethink of traditional means of airport funding, and in particular federal Airport Improvement Programme (AIP) grants** and the federally-controlled local passenger facility charge (PFC). The basic problem is that with the federal budget essentially out of control due largely to entitlement programmes that Congress is thus far unwilling to tackle, **there are increasing pressures to reduce the deficit by cutting back discretionary programmes.** **That means all federal grant programmes (such as AIP) are at risk, even though they may be largely funded by means of user taxes**. The overall budget in recent years has increasingly depended on general-fund support; as recently as 2007, the general fund provided less than 16% of the FAA budget, but in FY2011 that percentage has grown to over 31%. **If and when Congress cuts way back on general-fund support, AIP would likely be the “least-bad” candidate for cutbacks** (as opposed to air traffic controller payroll or NextGen ATC modernisation funding, which are the other two major budget categories).

# 2AC Econ Small Airports Internal

#### AIP funding is key to small airports

**Principato, 11** – President of ACI-NI, ex Executive Director of the National Commission to Ensure a Strong Competitive Airline Industry, Trade and Transportation Specialist for the Law Firm of Hunton & Williams (Greg, , Letter to Senator Ray Lahood, 8/22/2011 http://www.aci na.org/sites/default/files/lahood\_budget\_letter\_822.pdf )//MSO

Airports, like so many other sectors of the transportation industry, understand the impacts of the economy and the need to trim spending since airports have had to do the same. As you begin to prepare your Fiscal Year 2013 budget proposal, I urge you to consider the impact airports have as local economic engines in communities across the country. Now is the time for airports to invest in **infrastructure**, safety and security **projects** that not only benefit the traveling public but also **create jobs and spur growth** in cities and towns around the United States. One of ACI-NA’s priorities is to increase and strengthen the Airport Improvement Program (AIP). A**IP is especially important for smaller airports that have less ready access to private capital markets**. It helps ensure airports are able to fund critical projects that support aircraft operations including safety and security projects, runway and taxiway projects and other airfield maintenance. AIP is funded by the passengers who use the system for the purpose of ensuring safe and secure airport facilities. **Thus, it is imperative that the program**, which has been level funded since FY 2006, **be fully funded in FY 2013. AIP clearly meets the criteria of “investing in those areas critical to job creation and economic growth**” discussed in Office of Management and Budget Director Lew’s August 17 memo. In fact, I would encourage you to identify AIP as a “priority investment” **given the program’s excellent track record** over the last two years **in spurring economic growth and creating jobs in large and small communities**. According to both FAA and industry studies, the need for AIP far exceeds existing grants, therefore **any proposed reductions to AIP funding will mean significant delays for** vital safety, security and modernization **projects, negatively impacting** the traveling public and ultimately **our national economy.** America’s airports stand ready to work with you and our local communities in providing the safest and most efficient facilities for the traveling public. Thank you for your consideration of this request..

#### Small airports key to U.S. economy, multiple reasons

**Wingsfield, 2007** – general aviation reliever airport ( “Airports are Economic Magnets”, All about Airports, October 2007, http://www.wingsfield.com/all-about-airports)//MSO

**General aviation airports** like Wings **play a vital role in the health of the nation's economy, generating more than $102 billion** of the U.S. GDP **and employing 1.3 million** in high-skill, high-wage jobs. But **the economic benefits of a general aviation airport go far beyond direct jobs and salaries**. Wings Field, like all **general aviation airports, creates jobs and income**; saves lives; helps enforce the laws of the land; is a terminal destination for passengers; **and lower**s **the cost** of pharmaceuticals, food, clothing, and other **goods.** Many consider Wings to be one of the area’s principal community resources because what the airport does best is serve people who don't fly. **A study conducted** recently **for** the Commonwealth of **Virginia, but applicable to other states, found that: Each dollar spent by aviation** and/or aviation-dependent businesses **generates an additional $1.52 in economic activity; For every job at the airport, nearly three are created in the visitor-related economy**; Visitors arriving by air spend about $70 per day while in the area. Nationally, **every $1 spent on airport improvement projects generates $6.70 in off-airport economic gains for the surrounding community**. Pennsylvania’s 147 public-use airports created more than 288,700 jobs for people who earned $5.6 billion in payroll. In terms of economic impact, these airports generated $12.6 billion in economic activity for the Commonwealth. Locally, the direct and indirect impact of Wings Field on the economies of the Blue Bell, Plymouth Meeting, and Ambler areas is estimated at 121 jobs, $4.0 million in total payroll, and $6.7 million in total output. And these studies do not begin to address the social contribution to our region of services such as the PennSTAR medevac rescue helicopters that operate out of Wings and which have saved the lives of thousands of Montgomery County residents; the Pennsylvania State Police helicopters that periodically use the field to provide airborne law enforcement throughout this region; and two of the most active air taxi/air charter services in the region. Air travel buys Americans the nonnegotiable item we all need more of – time. And **airports** like Wings **are the focal point for accessing worldwide air travel**. Coupled with the tremendous social and economic benefits it provides, an airport is **a valuable local resource and a vital gateway to the national transportation system.**

### Small Airports Extensions

#### Without more funding Congress will shift resources away from small airports

**Kirk 09** – Specialist in Transportation Policy for the Congressional Research Service (Robert S. Kirk, “Airport Improvement Program (AIP) Reauthorization Issues for Congress”, Congressional research service, May 29, 2009, http://www.fas.org/sgp/crs/misc/R40608.pdf)//MSO

**If the AIP budget faces a period of constraint**, which could limit the availability of AIP discretionary funding for national priorities such as the OEP, **Congress may wish to revisit the distribution of the AIP apportionments** that are foregone by the large and medium-hub airports that impose a PFC. **Currently 87.5% of the foregone funds are directed to a small airport fund and 12.5% to the discretionary fund. Adjusting these percentages could be one way of increasing the money available** to support OEP projects. In 1990, the Airport Capacity Funding Advisory Committee recommended that all foregone funds should be “shifted to the discretionary fund and allocated proportionally across all categories of the discretionary category.” This original recommendation could be reconsidered.

#### **AIP key to small airports**

Rockefeller, 2008 – West Virginia News, quoting Press Release from US Senator Jay Rockefeller (“Rockefeller on Funding for Summersville Airport” 6/11/08 http://www.wsaz.com/political/newsreleasesheadlines/19795524.html//AB)

"Air travel is an essential component of the transportation network in our state, and the Summersville Airport is a vital part of that network," Byrd said. “These **funds will help ensure the safety of those who use the airport and expand opportunities there for the long-term**.” “This announcement is welcome news for the residents of Nicholas County,” Rahall said. “**Airports are vital economic engines** for our state, which must be kept in top-notch condition. **With federal investment for these airports once again on the budgetary chopping block**, I will continue to fight, along with West Virginia’s distinguished Senators, Byrd and Rockefeller, for every penny to keep our airports running as safely and efficiently as possible.” The airport’s grant was awarded through the **Air Improvement Program** (AIP), which **provides** **significant funding** **to local airports, helping them modernize the air traffic control system and expand airport runways and other facilities**. Senator Rockefeller was instrumental in securing a substantial annual increase in the AIP funding. Currently, Rockefeller is fighting for FAA reauthorization which would protect programs and grants serving West Virginia’s small community airports from the Administration’s proposed cuts. As Chairman of the Senate Appropriations Committee, Senator Byrd has worked to provide needed funding for the FAA programs that award these grants.

#### **AIP key funding source for small airports**

**Vauishnav 10** - Masters thesis for UIU reviewed by Master’s Committee: Professor Edward Feser (Chair) Assistant Professor Julie Cidell Professor Alex Winter-Nelson (Maulik, OPPORTUNITIES AND OBSTACLES IN OBTAINING AIR CONNECTIVITY FOR THE RESIDENTS OF FEDERALLY DESIGNATED ESSENTIAL AIR SERVICE COMMUNITIES, 2010, http://www.ideals.illinois.edu/bitstream/handle/2142/18311/Vaishnav\_Maulik.pdf?sequence=1)//MSO

The Airport Improvement Program provided $3.4 billion dollars in federal funds in 2007 to airports that annually enplaned over 2,500 passengers and were listed in the National Plan of Integrated Airport Systems (NPIAS) (FAA, 2010). Over 3,500 airports, including all EAS airports, are listed in NPIAS, establishing their eligibility for AIP funds in a given year. AIP is crucial for small and rural non-hub airports that cater to few passengers, as other funding sources are less prominent in their financing. Moreover, AIP appropriations favor small airports over large airports as federal funds can cover up to 95 percent of project costs at small airports, requiring a very small match of local funds, compared to 70 percent at larger airports (FAA, 2000). **Non-hub airports with commercial service depend on AIP for 89 percent of total capital spending,** while large and medium-hub airports depend on AIP for less than 30 percent of their spending (Kirk, 2007). AIP is an important, and at times the only source of funding for major capital projects at small airports that do not enplane many people. These airports often struggle to maintain their general aviation facilities due to fewer options for secured funding. Appropriations formulas require passenger activities at public-use airports and substantially increase airports’ access to AIP funds if they are designated as primary airports. The minimum entitlement to primary airports is $1 million a year, versus $150,000 a year for non-primary airports. The need for passenger activity to qualify for federal funds links AIP with EAS: small airports receiving Essential Air Service funds can significantly improve their finances and thus their infrastructure if they are able to achieve primary designation by enplaning over 10,000 people annually.

# Economy Extensions

#### Airports generate greater economies than whole countries and have a payroll the size of Michigan – investment key to prevent decline in industry competitiveness

**Principato 12—** President of Airports Council International-North America, which represents local, regional and state governing bodies that own and operate commercial airports (Greg, “Airports have Greater Economic Clout than the Economies of South Korea, Mexico, or Switzerland”, Airport Check-In, http://acinablog.wordpress.com/2012/02/29/airports-have-greater-economic-clout-than-the-economies-of-south-korea-mexico-or-switzerland/)//Bwang

America’s **airports support 10.5 million jobs**.  America’s airports support **$1.2 trillion in economic activity, larger than the GDP of South Korea**[.  “Airports, Inc.”](http://www.youtube.com/watch?v=Uhq9ogJE3R0&feature=youtu.be) directly employs 1.3 million people, making it the second largest employer in the nation, behind Wal-Mart.  **Total airport payroll equals the total payroll of the State of Michigan.  The total economic clout of airports:  8 percent of U.S. GDP and 7 percent of U.S. employment.** Those are big numbers.  But if you are still not convinced, consider this:  during that time, the jobs number increased by 56 percent.  Total payroll has gone up over 90 percent.  And the total contribution to the output of the American economy has more than doubled.  All this has happened despite the industry being devastated by the largest terrorist attack in history.  All this has happened despite the most severe economic downturn since the Great Depression, including spikes in the price of fuel. This economic growth occurred because we decided to invest in our economic future.  In economic times as difficult as most of us will ever experience, those investments paid off. That is why it is so discouraging that the recent FAA bill leaves in place federal limits on what airports and local communities can do to generate resources.  That is why it is so discouraging that the president’s budget reduces investment in airports.  That is why it is so discouraging that local communities cannot raise their own resources because of decisions made in Washington.  We are putting the future in peril, just as we are set to take off. Some have called for a new national *airline* policy, designed to promote the financial strength of airline companies.  I am a strong proponent of strong airline companies.  But the purpose of the air transportation system is the movement of people and products to destinations and markets.  It is not to ensure shareholder value for airlines; that’s what airline executives and boards are supposed to do. **We do need a new national AVIATION policy**, looking at all aspects from NextGen to financing airport infrastructure to the regulatory environment in which aviation must operate to the tax structure, all of it.  It must be d**esigned to strengthen the air transportation *system*, not merely any one component of it. We are now stepping back from investments in aviation at the same time as our competitors around the world are stepping up**.  We are **in peril of becoming what the steel industry became in the 1970’s and 1980’s, out of date and non-competitive**. We have a chance to avoid that.  Our study shows the benefits in terms of job creation and economic impact when good decisions and good investments are made.  I worry that the next study will show when the opposite happens.

#### **Civil aviation is key to the economy - GDP, jobs, trade balance**

FAA 11 – (Federal Aviation Administration, “The Economic Impact of Civil Aviation on the U.S. Economy”, U.S. Department of Transportation, http://www.faa.gov/air\_traffic/publications/media/FAA\_Economic\_Impact\_Rpt\_2011.pdf)//FK

In a world of decreasing barriers to trade, the U.S. civil aviation industry remains a unique engine for innovation and technological progress, one that provides infrastructure that keeps the nation competitive. This report found that, once all impacts are identified, civil aviation accounted for 5.2 percent of the U.S. economy in 2009. Aviation contributes to economic growth and to stronger ties to local and global markets for every region in the nation. The total output of civil aviation-related goods and services amounted to $1.3 trillion in 2009 and generated more than 10 million jobs, with earnings of almost $394.4 billion. Specific areas of civil aviation such as air cargo have contributed to more effective networking and collaboration between companies far and wide. Recovery in the wake of the recent recession presents many challenges and opportunities for aviation and the U.S. economy as a whole. There is evidence that the capacity reductions made by airlines and airports as the result of high fuel prices allowed the industry to better weather the storm, yet the prevailing economic winds will lead the industry to continue to innovate and become leaner and more responsive to volatile market conditions. The cost of fuel will likely remain a continuing concern for airlines and those affected by air transportation. Many analysts believe that the price of oil will continue to transform the airline industry for years to come, just as it will influence the prospects of other sectors of the economy. As it did in the past century, the role of air transportation will continue to grow for the U.S. and global economies. The economic impacts of civil aviation quantified in this report summarize the benefits made possible by a vital and innovative industry. The industry contributes positively to the U.S. trade balance, creates high-paying jobs, helps keep just-in-time business models viable and connects us to friends, family and commercial opportunities. As the role of air transportation evolves and becomes even more integral to our way of life, a safe and efficient air transportation system will continue to be a vital, even essential, component of a strong and healthy American economy in the 21st century

#### Aviation industry key to economy – GDP, jobs, exports – must invest in infrastructure now

**AIA 11** (Aerospace Industries Association represents the nation's leading manufacturers and suppliers of civil, military, and business aircraft, helicopters, unmanned aircraft systems, space systems, aircraft engines, missiles, materiel and related components, equipment, services and information technology. Aerospace Industries Association, Civil Aviation, 2011, http://www.aia-aerospace.org/assets/ip\_civil\_2011.pdf) //LP

The most recent data show that the **sale of goods and services tied directly or indirectly to civil aviation constituted $1.3 trillion, or about 5.6 percent of the nation’s total gross domestic product in 2009. Our industry directly and indirectly sustains nearly 12 million jobs.** The U.S. aerospace industry **remains the single largest contributor to the nation’s balance of trade, with $87 billion in exports and a $57.4 billion trade surplus in 2011**. The global recession of the past few years has reduced demand for leisure and business travel and the shipment of just-in-time goods. Many of our nation’s aging aviation infrastructure limitations have been masked by the economic slowdown. Delays are down; aircraft CO2 emissions are 10 percent below 2005 levels. Yet, our 1960s-era air traffic control system will not be able to handle demand when it returns. **Unless we invest in sorely needed transformational aviation infrastructure now, civil aviation- generated economic growth will be stunted and the economic cost of system delay will likely eclipse $40 billion** annually by 2012.

#### Civil aviation key to global economy and promotes global cooperation **MB 11 –** (Manilla Bulleting Publishing Corportion, “Internation Civil Aviation Wednesday”, 6 December 2011, http://mb.com.ph/node/343894/international-civil-aviation-wedne)//FK

December 6, 2011, 10:53pm MANILA, Philippines — The United Nations General Assembly proclaimed December 7 as International Civil Aviation Day. The event highlights the economic and social contribution of air transport to our global society and how it has preserved and created friendships and understanding among the nations of the world. Apart from the benefits of safely transporting over two billion people a year throughout the world, air transport is a global business which has been one of the driving forces of economic growth since World War II. It is today the foundation for the tourism industry. Aviation has also undergone a sea of change in the last decade. It has had its share of woes. Economic problems in Europe and the United States have affected international aviation, resulting in losses for many enterprises. But there is tremendous optimism in the future, as seen in the growth of many aviation organizations purchasing more and more aircraft for their operations. In the last one hundred years since the Wright brothers made flying more than a hobby, mankind has flown across oceans, broken the sound barrier, launched satellites, and landed on the moon. At the crossroads of these developments everything has become interconnected and global as civil aviation continues to “promote cooperation between nations upon which the peace of the world depends.”

#### Aviation is key to the global economy – stimulates econ and spurs trade and tourism

**SSCA 11** (State Secretariat of Civil Aviation, “Aviation – A Catalyst For Development of Economic and Social Progress”, 20 June 2012, http://www.civilaviation.gov.kh/ss1\_overview\_aviation\_catalyst.htm)//FK

Aviation is contributing quick assistance efforts in areas affected by natural disasters or political strife, stimulating the economy, trade and tourism, generating business opportunities and enhances the potential for improving quality of life - in both developed and developing regions**:** • Aviation transport annually more than 2 billion passengers, 40% of international exported good (by value) and 40% of international tourists travel by air. • Aviation generates 29 million jobs worldwide. Its global economic impact is estimated at USD2,960 billion, equivalent to 8% of world GDP. • Aviation covers its infrastructure costs: unlike road and rail, it is often a net contribution to national treasuries through taxation, Aviation is the most efficient way traveling • It uses the optimum balance between two points and the maximum surface on the ground; Its occupancy rates exceed 75% which is more than double rail and road load factors; • There is no practical alternative for passenger on journeys exceeding 1,500km/900miles. Today, tourism is one of the central pillars of the global services economy, and one that is vital to Cambodia’s development. Tourism has grown dramatically in the past half century and is projected to triple over the next two decades, paralleled closely by growth in air transport. Directly and indirectly, Aviation and Tourism are linked (business & leisure, domestic and international) with aviation playing a key role in supporting national GDP, creating employment opportunities, along with investment and trade for the country, with this being much more evident in the higher intensity leisure destinations. Aviation is a principal service sector export in virtually all countries and the primary foreign exchange earner in 46 of the poorest countries in the world. It is a key catalyst for economic growth and social progress and has a profound influence on the quality of life of populations around the globe**. It integrates the world economy** and promotes the international exchange of people, products, investment, and ideas. Indeed, to a very large extent, civil aviation has enabled small community and rural populations to enter the mainstream of global commerce (trade) by linking such communities with worldwide population, manufacturing, and cultural centers. Civil aviation products and services also generate a significant surplus for the Cambodian trade and tourism accounts and are in the forefront in the development and use of advanced technologies. Civil aviation has become an integral part of the Cambodian economy. Fundamentally, civil aviation touches nearly every aspect of our lives, and its success will shape Cambodian society and the economy in the coming decades to a great degree

#### Funding AIP would add millions of jobs to the economy ACI-NA 11 – local, regional and state governing bodies that own and operate commercial airports in the United States and Canada (Airports Council International – North America, February 2011 “ACI-NA 2011 Capital Needs Survey, $80.1bn in Projects ‘Essential’”, ACI-NA, http://aci-na.org/newsroom/press-releases/aci-na-2011-capital-needs-survey-801bn-projects-%E2%80%98essential%E2%80%99)//Bwang

“**The 2011 capital needs survey shows that airports must continue to improve airport infrastructure** to ensure the safety and security of the traveling public”, said ACI-NA President Greg Principato.  “**These projects, financed by** the self-funded, **job-creating** **Airport Improvement Program (AIP**), as well as Passenger Facility Charge (PFC) user fees, allow communities to use local resources to fund local projects, generating local jobs.”“These projects also **help reduce passenger delays and facilitate price and service competition** for passengers across the United States,” said Principato. The Department of Transportation tells us that **$1 billion in transportation infrastructure supports approximately 34,779 jobs. If all of the $80.1 billion in airport capital needs were met, the airport industry could help add 2 to 3 million jobs to our struggling economy.**

# Terrorism Extensions

#### Despite death of terrorist leaders and increased security, terrorists will increasingly attack airports – vulnerabilities in security remain and magnify the probability of a successful attack

Brandt, 2011 – Writer for the CTC Sententinel: The Combating Terrorism Center is an independent educational and research institution based in the Department of Social Sciences at the United States Military Academy, West point. And a director at Lime, a political risk consultancy based in the United Arab Emirates. Prior to joining Lime, he worked as a threat analyst for a major U.S. airline, as well as at the New Jersey Office of Homeland Security and Preparedness. Mr. Brandt holds an MA in Security Studies from Georgetown University. (Ben, “Terrorist Threats to Commercial Aviation: A Contemporary Assessment “, West Point, November 30, 2011, http://www.ctc.usma.edu/posts/terrorist-threats-to-commercial-aviation-a-contemporary-assessment) // GKoo

Ten years ago, al-Qa`ida utilized four U.S. commercial airliners to destroy the World Trade Center’s towers, damage the Pentagon, and kill close to 3,000 people. This attack spurred the United States to convert its counterterrorism efforts into a sustained war on terrorism, resulting in the invasion of Afghanistan and Iraq, the capture or killing of hundreds of al-Qa`ida members, and the eventual death of al-Qa`ida chief Usama bin Ladin. There has been extensive reflection in recent months regarding the implications of Bin Ladin’s death and the Arab Spring to al-Qa`ida and its affiliated groups. Two critical issues, however, have been partially sidelined as a result. How has the terrorist threat to commercial aviation evolved since the events of 9/11? How have actions by the U.S. and other governments worked to mitigate this threat? This article offers a thorough review of recent aviation-related terrorist plots, subsequent mitigation strategies, and current terrorist intentions and capabilities dealing with commercial aviation. It concludes by offering three steps security experts can take to reduce the terrorist threat to commercial aviation. Aviation-Related Plots Since 9/11 and the Regulatory Response A number of al-Qa`ida-affiliated plots sought to target commercial aviation since 9/11. A sampling of these include the “shoe bomber” plot in December 2001, an attempt to shoot down an Israeli airliner in Kenya in 2002, the liquid explosives plot against transatlantic flights in 2006, the Christmas Day plot in 2009, and the cargo bomb plots in 2010. Other prominent operations attempted or executed by Islamist extremists during this period include a 2002 plot to hijack an airliner and crash it into Changi International Airport in Singapore, the 2002 El Al ticket counter shootings at Los Angeles International Airport, the 2004 bombings of two Russian airliners, the 2007 Glasgow airport attack, a 2007 plot against Frankfurt Airport by the Sauerland cell, a 2007 attempt by extremists to target fuel lines at JFK International Airport in New York, the 2011 suicide bombing at Moscow’s Domodedovo International Airport, and the 2011 shootings of U.S. military personnel at Frankfurt International Airport. In response to these incidents, the U.S. government and many other countries have dramatically increased aviation security measures to prevent or deter future attacks**.** Many of these measures are well known to the public, including: the hardening of cockpit doors; federalization of airport security screening staff and the creation of the Transportation Security Administration (TSA); deployment of federal air marshals (FAMs) and federal flight deck officers (FFDOs) aboard aircraft; implementation of new detection equipment and methods, such as advanced imaging technology (AIT), often referred to as “**body scanners**”; increased amounts of screening for cargo; **explosive trace detection** (ETD), full body “patdowns,” and behavioral detection officers (BDOs); enhanced scrutiny for visa applicants wanting to travel to the United States; and the use of watch lists to screen for terrorists to prevent them from boarding flights or from gaining employment in airports or airlines. Certain measures—such as invasive patdowns, AIT scanning, inducing passengers to remove jackets, belts, and shoes for inspection, and requiring them to travel with **minimal amounts of liquid** in their possession—have drawn widespread complaints regarding their inconvenience, as well as questions about their supposed efficacy. The reactive nature of many such measures has been widely noted as well, with some security practices designed to counter highly specific attack techniques utilized in past terrorist plots. Al-Qa`ida in the Arabian Peninsula (AQAP) sarcastically commented on this tendency in its online magazine Inspire, rhetorically asking the U.S. government whether it thought the group had no other way to conceal explosives after the TSA prohibited passengers from carrying printer cartridges. Current Threats to Aviation Despite the strenuous efforts by governments to harden commercial aviation in the post-9/11 era, the number of plots illustrates that al-Qa`ida core, its affiliates, and numerous other Islamist extremist groups and self-radicalized individuals maintain a high level of interest in attacking aviation. Despite the organizational disruptions caused by the deaths of numerous senior al-Qa`ida leaders in 2011, and the current preoccupation of several al-Qa`ida affiliates with local conflicts, this ongoing interest in attacking aviation is unlikely to dissipate in the long-term. Furthermore, the evolving tactics utilized in these various plots lend weight to AQAP’s contention that government regulators suffer from a lack of imagination in anticipating and mitigating emergent and existing threats. As indicated by numerous accounts, including the description of the cargo plot contained in Inspire, terrorists constantly seek to analyze existing aviation security measures to probe for weaknesses and develop countermeasures. Terrorists’ ongoing efforts to study and defeat security are further exemplified by the arrest of Rajib Karim, a former information technology employee at British Airways; prior to his arrest, Karim maintained an ongoing dialogue with AQAP operative Anwar al-`Awlaqi and attempted to provide al-`Awlaqi with information on aviation security procedures.[1] Therefore, despite government efforts to improve aviation security, a number of critical tactical threats remain.

#### Terrorists will target general aviation

**Elias, 2009**(Bart, specialist in aviation policy, Federation of American Scientists, “Securing General Aviation”, March 3, http://www.fas.org/sgp/crs/homesec/RL33194.pdf) Megan

**GA security poses significant challenges for policymakers and security experts because GA is highly diverse, geographically dispersed, and relatively open compared to commercial airports servicing passenger airlines** and other protected infrastructure such as nuclear reactors and chemical plants. **The security threat is not so much to GA assets themselves, but rather, from terrorists seeking to exploit GA assets to attack critical infrastructure or high-profile targets**. However, **some GA assets could themselves be terrorist targets**. For example, some corporate aviation operators have expressed concern that **aircraft carrying high-profile business leaders and executives,** such as presidents of major U.S. corporations, **could be targeted**, particularly when operating overseas in areas where security concerns exist. Nonetheless, **the primary threat** identified regarding GA, both overseas and within the United States, **is the concern that aircraft may be used by terrorists to launch an attack against critical facilities or infrastructure.**

#### AIP funds security projects

**GAO 02 -** Investigative arm of Congress charged with examining matters relating to the receipt and payment of public funds (U.S. Government Accountability Office, “Airport Finance: Using Airport Grant Funds for Security Projects Has Affected Some Development Projects,” GAO report, 10/25, http://www.gao.gov/assets/240/236116.html)//JS

During fiscal year 2002, the Federal Aviation Administration (FAA) awarded a total $561 million in AIP grant funds to airports for security projects related to the events of September 11, 2001.[Footnote 1] This $561 million represents approximately 17 percent of the $3.3 billion available for AIP grants in fiscal year 2002 and is the largest amount awarded to airports for security projects in a single year since the program began in 1982. In contrast, FAA awarded an average of less than 2 percent of the program’s total funding to security projects for fiscal years 1982 through 2001. During this period, AIP grant funds awarded to airports for security projects ranged from $2 million in fiscal year 1982 to $122 million in fiscal year 1991, when airports implemented new security requirements governing access controls, according to FAA Airport Planning and Programming officials.[Footnote 2] Additionally, the $561 million FAA awarded to airports for security projects in fiscal year 2002 represents more than an 800 percent

increase over the $57 million for security projects awarded in fiscal year 2001. Based on data provided by FAA, all of the security projects funded with AIP grants since the events of September 11, 2001, met the legislative and program eligibility requirements. The projects, which range from access control systems to terminal modifications, qualified for AIP funding either under eligibility requirements in effect before September 11, 2001, or under subsequent statutory and administrative changes. The Aviation and Transportation Security Act (ATSA), passed in November 2001, amended existing legislation governing AIP eligibility to permit funding for fiscal year 2002 of any security-related activity required by law or the Secretary of Transportation after September 11, 2001, and before October 1, 2002. This legislation also permits FAA to use AIP funds for replacing airport baggage systems and the reconfiguration of terminal baggage areas to accommodate explosives detection systems. In addition to these legislative changes, FAA issued new program guidance that clarified project eligibility requirements as defined in 49 U.S.C. Section 47102(3) to include, among other items, surveillance equipment, blast proofing of terminals, and explosives detection canines for use in terminals.

### Bioterrorism

#### Bioterrorism risk high

**Warrick 06** - Washington Post Staff Writer (Joby, “Custom-Built Pathogens Raise Bioterror Fears”, July 31, 2006. < http://www.washingtonpost.com/wp-dyn/content/article/2006/07/30/AR2006073000580.html>//AB)

Eckard Wimmer knows of a shortcut terrorists could someday use to get their hands on the lethal viruses that cause Ebola and smallpox. He knows it exceptionally well, because he discovered it himself. In 2002, the German-born molecular geneticist startled the scientific world by creating the first live, fully artificial virus in the lab. It was a variation of the bug that causes polio, yet different from any virus known to nature. And Wimmer built it from scratch. The virus was made wholly from nonliving parts, using equipment and chemicals on hand in Wimmer's small laboratory at the State University of New York here on Long Island. The most crucial part, the genetic code, was picked up for free on the Internet. Hundreds of tiny bits of viral DNA were purchased online, with final assembly in the lab. Wimmer intended to sound a warning, to show that science had crossed a threshold into an era in which genetically altered and made-from-scratch germ weapons were feasible. But in the four years since, other scientists have made advances faster than Wimmer imagined possible. Government officials, and scientists such as Wimmer, are only beginning to grasp the implications. "The future," he said, "has already come." Five years ago, **deadly anthrax attacks forced Americans to confront the suddenly real prospect of bioterrorism**. Since then the Bush administration has poured billions of dollars into building a defensive wall of drugs, vaccines and special sensors that can detect dangerous pathogens. But already, technology is hurtling past it. While government scientists press their search for new drugs for old foes such as classic anthrax, a revolution in biology has ushered in an age of engineered microbes and novel ways to make them. The new technology opens the door to new tools for defeating disease and saving lives. But today, **in hundreds of labs worldwide, it is** also **possible to transform common intestinal microbes into killers. Or to make deadly strains even more lethal. Or to resurrect bygone killers, such the 1918 influenza. Or to manipulate a person's hormones by switching genes on or off. Or to craft cheap, efficient delivery systems that can infect large numbers of people. "The biological weapons threat is multiplying** and will do so regardless of the countermeasures we try to take," said Steven M. Block, a Stanford University biophysicist and former president of the Biophysical Society. "You can't stop it, any more than you can stop the progress of mankind. You just have to hope that your collective brainpower can muster more resources than your adversaries'." The Bush administration has acknowledged the evolving threat, and last year it appointed a panel of scientists to begin a years-long study of the problem. It also is building a large and controversial lab in Frederick, where new bioterrorism threats can be studied and tested. But overall, **specific responses have been few and slow**. The U.S. Centers for Disease Control and Prevention has declined so far to police the booming gene-synthesis industry, which churns out made-to-order DNA to sell to scientists. Oversight of controversial experiments remains voluntary and sporadic in many universities and private labs in the United States, and occurs even more rarely overseas. Bioterrorism experts say **traditional biodefense approaches, such as stockpiling antibiotics or locking up well-known strains** such as the smallpox virus, remain important. But they **are not enough.** "There's a name for fixed defenses that can easily be outflanked: They are called Maginot lines," said Roger Brent, a California molecular biologist and former biodefense adviser to the Defense Department, referring to the elaborate but short-sighted network of border fortifications built by France after World War I to prevent future invasions by Germany. "By themselves," Brent said, "stockpiled defenses against specific threats will be no more effective to the defense of the United States than the Maginot line was to the defense of France in 1940." "There's a name for fixed defenses that can easily be outflanked: They are called Maginot lines," said Roger Brent, a California molecular biologist and former biodefense adviser to the Defense Department, referring to the elaborate but short-sighted network of border fortifications built by France after World War I to prevent future invasions by Germany. "By themselves," Brent said, "stockpiled defenses against specific threats will be no more effective to the defense of the United States than the Maginot line was to the defense of France in 1940." Wimmer's artificial virus looks and behaves like its natural cousin -- but with a far reduced ability to maim or kill -- and could be used to make a safer polio vaccine. But it was Wimmer's techniques, not his aims, that sparked controversy when news of his achievement hit the scientific journals. As the creator of the world's first "de novo" virus -- a human virus, at that -- Wimmer came under attack from other scientists who said his experiment was a dangerous stunt. He was accused of giving ideas to terrorists, or, even worse, of inviting a backlash that could result in new laws restricting scientific freedom. Wimmer counters that he didn't invent the technology that made his experiment possible. He only drew attention to it. "To most scientists and lay people, the reality that viruses could be synthesized was surprising, if not shocking," he said. "We consider it imperative to inform society of this new reality, which bears far-reaching consequences." One of the world's foremost experts on poliovirus, Wimmer has made de novo poliovirus six times since his groundbreaking experiment four years ago. Each time, the work is a little easier and faster. New techniques developed by other scientists allow the creation of synthetic viruses in mere days, not weeks or months. Hardware unveiled last year by a Harvard genetics professor can churn out synthetic genes by the thousands, for a few pennies each. But Wimmer continues to use methods available to any modestly funded university biology lab. He reckons that tens of thousands of scientists worldwide already are capable of doing what he does. "Our paper was the starting point of the revolution," Wimmer said. "But eventually the process will become so automated even technicians can do it." Wimmer's method starts with the virus's genetic blueprint, a code of instructions 7,441 characters long. Obtaining it is the easiest part: The entire code for poliovirus, and those for scores of other pathogens, is available for free on the Internet. Armed with a printout of the code, Wimmer places an order with a U.S. company that manufactures custom-made snippets of DNA, called oglionucleotides. The DNA fragments arrive by mail in hundreds of tiny vials, enough to cover a lab table in one of Wimmer's three small research suites. Using a kind of chemical epoxy, the scientist and his crew of graduate assistants begin the tedious task of fusing small snippets of DNA into larger fragments. Then they splice together the larger strands until the entire sequence is complete. The final step is almost magical. The finished but lifeless DNA, placed in a broth of organic "juice" from mushed-up cells, begins making proteins. Spontaneously, it assembles the trappings of a working virus around itself. While simple on paper, it is not a feat for amateurs, Wimmer said. There are additional steps to making effective bioweapons besides acquiring microbes. Like many scientists and a sizable number of biodefense experts, Wimmer believes traditional terrorist groups such as al-Qaeda will stick with easier methods, at least for now. Yet al-Qaeda is known to have sought bioweapons and has recruited experts, including microbiologists. And for any skilled microbiologist trained in modern techniques, Wimmer acknowledged, synthetic viruses are well within reach and getting easier. "This," he said, "is a wake-up call." The global biotech revolution underway is more than mere genetic engineering. It is genetic engineering on hyperdrive. New scientific disciplines such as synthetic biology, practiced not only in the United States but also in new white-coat enclaves in China and Cuba, seek not to tweak biological systems but to reinvent them. http://view.atdmt.com/CNT/view/396314132/direct;wi.1;hi.1/01/ The holy grail of synthetic biologists is the reduction of all life processes into building blocks -- interchangeable bio-bricks that can be reassembled into new forms. The technology envisions new species of microbes built from the bottom up: "living machines from off-the-shelf chemicals" to suit the needs of science, said Jonathan Tucker, a bioweapons expert with the Washington-based Center for Non-Proliferation Studies. "It is possible to engineer living organisms the way people now engineer electronic circuits," Tucker said. In the future, he said, these microbes could produce cheap drugs, detect toxic chemicals, break down pollutants, repair defective genes, destroy cancer cells and generate hydrogen for fuel. In less than five years, synthetic biology has gone from a kind of scientific parlor trick, useful for such things as creating glow-in-the-dark fish, to a cutting-edge bioscience with enormous commercial potential, said Eileen Choffnes, an expert on microbial threats with the National Academies' Institute of Medicine. "Now the technology can be even done at the lab bench in high school," she said. Along with synthetic biologists, a separate but equally ardent group is pursuing DNA shuffling, a kind of directed evolution that imbues microbes with new traits. Another faction seeks novel ways to deliver chemicals and medicines, using ultra-fine aerosols that penetrate deeply into the lungs or new forms of microencapsulated packaging that control how drugs are released in the body. Still another group is discovering ways to manipulate the essential biological circuitry of humans, using chemicals or engineered microbes to shut down defective genes or regulate the production of hormones controlling such functions as metabolism and mood. Some analysts have compared the flowering of biotechnology to the start of the nuclear age in the past century, but there are important differences. This time, the United States holds no monopoly over the emerging science, as it did in the early years of nuclear power. Racing to exploit each new discovery are dozens of countries, many of them in the developing world. There's no binding treaty or international watchdog to safeguard against abuse. And the secrets of biology are available on the Internet for free, said Robert L. Erwin at a recent Washington symposium pondering the new technology. He is a geneticist and founder of the California biotech firm Large Scale Biology Corp. "It's too cheap, it's too fast, there are too many people who know too much," Erwin said, "and it's too late to stop it.**"** In May, when 300 synthetic biologists gathered in California for the second national conference in the history of their new field, they found protesters waiting. "Scientists creating new life forms cannot be allowed to act as judge and jury," Sue Mayer, a veterinary cell biologist and director of GeneWatch UK, said in a statement signed by 38 organizations. Activists are not the only ones concerned about where new technology could lead. Numerous studies by normally staid panels of scientists and security experts have also warned about the consequences of abuse. **An unclassified CIA study in 2003 titled "The Darker Bioweapons Future" warned of a potential for a "class of new, more virulent biological agents engineered to attack" specific targets. "The effects of some of these engineered biological agents could be worse than any disease known to man**," the study said. It is not just the potential for exotic diseases that is causing concern. Harmless bacteria can be modified to carry genetic instructions that, once inside the body, can alter basic functions, such as immunity or hormone production, three biodefense experts with the Defense Intelligence Agency said in an influential report titled "Biotechnology: Impact on Biological Warfare and Biodefense." As far as is publicly known, no such weapons have ever been used, although Soviet bioweapons scientists experimented with genetically altered strains in the final years of the Cold War. Some experts doubt terrorists would go to such trouble when ordinary germs can achieve the same goals. "The capability of terrorists to embark on this path in the near- to mid-term is judged to be low," Charles E. Allen, chief intelligence officer for the Department of Homeland Security, said in testimony May 4 before a panel of the House Committee on Homeland Security. "Just because the technology is available doesn't mean terrorists can or will use it." A far more **likely source,** Allen said, **is a "lone wolf": a scientist or biological hacker working alone or in a small group, driven by ideology or perhaps personal demons.** Many experts believe the anthrax attacks of 2001 were the work of just such a loner. "All it would take for advanced bioweapons development," Allen said, "is one skilled scientist and modest equipment -- an activity we are unlikely to detect in advance." Throughout the Western world and even in developing countries such as India and Iran, dozens of companies have entered the booming business of commercial gene synthesis. Last fall, a British scientific journal, New Scientist, decided to contact some of these DNA-by-mail companies to show how easy it would be to obtain a potentially dangerous genetic sequence -- for example, DNA for a bacterial gene that produces deadly toxins. Only five of the 12 firms that responded said they screened customers' orders for DNA sequences that might pose a terrorism threat. Four companies acknowledged doing no screening at all. Under current laws, the companies are not required to screen. In the United States, the federal "Select Agent" rule restricts access to a few types of deadly bacteria, viruses and toxins. But, under the CDC's interpretation of the rule, there are few such controls on transfers of synthetic genes that can be turned into killers. Changes are being contemplated, but for now the gap is one example of technology's rapid advance leaving law and policy behind. "It would be possible -- fully legal -- for a person to produce full-length 1918 influenza virus or Ebola virus genomes, along with kits containing detailed procedures and all other materials for reconstitution," said Richard H. Ebright, a biochemist and professor at Rutgers University. "It is also possible to advertise and to sell the product, in the United States or overseas." While scientists tend to be deeply skeptical of government intrusion into their laboratories, many favor closer scrutiny over which kinds of genetic coding are being sold and to whom. Even DNA companies themselves are lobbying for better oversight. Blue Heron Biotechnology, a major U.S. gene-synthesis company based in suburban Seattle, formally petitioned the federal government three years ago to expand the Select Agent rule to require companies to screen DNA purchases. The company began voluntarily screening after receiving suspicious requests from overseas, including one from a Saudi customer asking for genes belonging to a virus that causes a disease akin to smallpox. "The request turned out to be legitimate, from a real scientist, but it made us ask ourselves: How can we make sure that some crazy person doesn't order something from us?" said John Mulligan, Blue Heron's founder and chief executive. "I used to think that such a thing was improbable, but then September 11 happened." Some scientists also favor greater scrutiny -- or at least peer review -- of research that could lead to the accidental or deliberate release of genetically modified organisms. In theory, such oversight is provided by volunteer boards known as institutional biosafety committees. Guidelines set by the National Institutes of Health call on federally funded schools and private labs to each appoint such a board. A 2004 National Academy of Sciences report recommended that the committees take on a larger role in policing research that could lead to more powerful biological weapons. In reality, many of these boards appear to exist only on paper. In 2004, the nonprofit Sunshine Project surveyed 390 such committees, asking for copies of minutes or notes from any meetings convened to evaluate research projects. Only 15 institutions earned high marks for showing full compliance with NIH guidelines, said Edward Hammond, who directed the survey. Nearly 200 others who responded had poor or missing records or none at all, he said. Some committees had never met. New techniques that unlock the secrets of microbial life may someday lead to the defeat of bioterrorism threats and cures for natural diseases, too. But today, the **search for new drugs of all kinds remains agonizingly slow**. Five years after the Sept. 11 attacks, the federal government budgets nearly $8 billion annually -- an 18-fold increase since 2001 -- for the defense of civilians against biological attack. Billions have been spent to develop and stockpile new drugs, most of them each tied to a single, well-known bioterrorism threat, such as anthrax. Despite efforts to streamline the system, developing one new drug could still take up to a decade and cost hundreds of millions of dollars. If successful, the drug is a solution for just one disease threat out of a list that is rapidly expanding to include man-made varieties. In a biological attack, waiting even a few weeks for new drugs may be disastrous, said Tara O'Toole, a physician and director of the Center for Biosecurity at the University of Pittsburgh Medical Center. "**We haven't yet absorbed the magnitude of this threat to national security**," said O'Toole, who worries that the national commitment to biodefense is waning over time and the rise of natural threats such as pandemic flu. "It is true that pandemic flu is important, and we're not doing nearly enough, but I don't think pandemic flu could **take down the United States of America. A campaign of moderate biological attacks could**."

#### A bioterror attack is coming by 2013

**AP, 2008**   
(“Panel warns biological attack likely by 2013”, 12/1/2008, http://www.msnbc.msn.com/id/28006645/#.T-IVKitYtlp)

**The U**nited **S**tates **can expect a terrorist attack using** nuclear or more likely **biological weapons before 2013**, **reports a bipartisan commission in a study** being briefed Tuesday to Vice President-elect Joe Biden. It suggests the Obama administration bolster efforts to counter and prepare for germ warfare by terrorists. "**Our margin of safety is shrinking, not growing,"** states the report, obtained by The Associated Press. It is scheduled to be publicly released Wednesday. The commission is also encouraging the new White House to appoint one official on the National Security Council to exclusively coordinate U.S. intelligence and foreign policy on combating the spread of nuclear and biological weapons. **The report** of the Commission on the Prevention of WMD Proliferation and Terrorism, led by former Sens. Bob Graham of Florida and Jim Talent of Missouri**, acknowledges that terrorist groups still lack the needed scientific and technical ability** to make weapons out of pathogens or nuclear bombs. **But it warns that gap can be easily overcome**, if terrorists find scientists willing to share or sell their know-how. "**The United States should be** less concerned that terrorists will become biologists and far more **concerned that biologists will become terrorists**," the report states. **More likely than nuclear**  The commission believes **biological weapons are more likely to be obtained and used before nuclear** or radioactive weapons because nuclear facilities are more carefully guarded. **Civilian laboratories with** potentially **dangerous pathogens abound**, however, **and could easily be compromised.** "**The biological threat is greater than the nuclear**; **the acquisition of deadly pathogens, and their weaponization and dissemination in aerosol form, would entail fewer technical hurdles** than the theft or production of weapons-grade uranium or plutonium and its assembly into an improvised nuclear device," states the report. It notes that the U.S. government's counterproliferation activities have been geared toward preventing nuclear terrorism. The commission recommends the prevention of biological terrorism be made a higher priority. Study chairman Graham said anthrax remains the most likely biological weapon. However, he told the AP that contagious diseases — like the flu strain that killed 40 million at the beginning of the 20th century — are looming threats. That virus has been recreated in scientific labs, and there remains no inoculation to protect against it if is stolen and released. Graham said the threat of a terrorist attack using nuclear or biological weapons is growing "not because we have not done positive things but because **adversaries are moving at an even faster pace to increase their access**" to those materials. He noted last week's rampage by a small group of gunmen in Mumbai. "If those people had had access to a biological or nuclear weapon they would have multiplied by orders of magnitude the deaths they could have inflicted," he said.

#### Low-cost, high-impact incentivizes bioterror attacks

**SIU 12** – Department of Internal Medicine, Division of Infectious Diseases (Southern Illinois University School of Medicine “Overview of Potential Agents of Biological Terrorism” 1/13/12 http://www.siumed.edu/medicine/id/bioterrorism.htm//AB)

**Biological weapons are very attractive to the terrorist because of several characteristics**. Aerosols of biological agents are invisible, silent, odorless, tasteless, and are relatively **easily dispersed**. They are 600 - 2000 times cheaper than other weapons of mass destruction. It is estimated that the cost would be about **0.05% the cost of a conventional weapon** to produce similar numbers of mass casualties per square kilometer. The **production is relatively easy**, using the common technology available for the production of some antibiotics, vaccines, foods, and beverages. The delivery systems such as spray devices from an airplane, boat or car are commonly available. The natural lead time provided by the organism's incubation period (3 to 7 days for most potential organisms) would allow for the terrorists' escape before any investigation starts. In addition, the use of an endemic infectious agent may cause confusion because of the inability to differentiate a biological warfare attack from a natural epidemic. For some agents potential exists for secondary or tertiary transmission by person-to-person transmission or natural vectors. The consequences of **biological weapons** use are many. They can **rapidly produce mass effect that overwhelms services and the health care system** of the communities. **Most of the civilian population is susceptible to infections** caused by these agents. They are associated with high morbidity and mortality rates. The resulting **illness** is usually **difficult to diagnose and treat early,** particularly in areas where the disease is rarely seen. One kilogram of anthrax powder has the capability to kill up to 100,000 people depending on the mechanism of delivery (33). The economic impact of a biological attack has been estimated to be from 478 million/100,000 persons exposed (brucellosis scenario) to 26.2 billion/100,000 persons exposed (anthrax scenario) (34).

#### Bioterrorists are rapidly developing capabilities to attack

**Kimery 10** – Homeland Security Today Online Editor (Anthony L., “The Threat of Bioterrorism and the Ability to Detect It” 12/29/10 < http://www.hstoday.us/blogs/the-kimery-report/blog/the-threat-of-bioterrorism-and-the-ability-to-detect-it/bea57df4219d59980fcbd46429f7a918.html>//AB)

“But **they could develop that capability quickly**,” the report added, noting that “in 2006 congressional testimony, Charles Allen, Under Secretary for Intelligence and Analysis at the Department of Homeland Security, noted that **the threat of bioterrorism could increase rapidly if a terrorist group were able to recruit technical experts who had experience in a national biological warfare program, with knowledge comparable to that of the perpetrator of the 2001 anthrax letter attacks**. In other words, given the high level of know-how needed to use disease as a weapon to cause mass casualties, **the United States should be** less concerned that terrorists will become biologists and far more **concerned that biologists will become terrorists**.” Continuing, the panel’s report stated that “the last point bears repeating. We accept the validity of intelligence estimates about the current rudimentary nature of terrorist capabilities in the area of biological weapons but caution that the **terrorists are trying to upgrade their capabilities and could do so by recruiting skilled scientists. In this respect the biological threat is greater than the nuclear; the acquisition of deadly pathogens, and their weaponization and dissemination in aerosol form, would entail fewer technical hurdles than the theft or production of weapons-grade uranium or plutonium and its assembly into an improvised nuclear device**.” But, the Commission ultimately concluded, “**the difficulty of quantifying the bioterrorism threat to the United States does not make that threat any less real or compelling. It involves both motivation and capability, and the first ingredient is clearly present. Al Qaeda had an active biological weapons program in the past, and it is unlikely that the group has lost interest** in employing infectious disease as a weapon. That roughly a half-dozen countries are suspected to possess or to be seeking biological weapons also provides ample grounds for concern.” Some WMD counterterrorism authorities and other officials disagreed, saying post-9/11 intelligence has continued to indicate that **Al Qaeda remains interested in carrying out biological attacks**. The concerns have been serious enough that beginning in May 2005, the Heart of America Joint Terrorism Task Force (HOA-JTTF), in conjunction with the Kansas City Division of the FBI and the greater Kansas City metro area police, convened the [International Symposium on Agroterrorism](http://www.fbi-isa.org/" \t "_blank) to bring together experts and officials from around the world to discuss this threat. There have been three symposiums since then that have been attended by thousands of authorities and government officials from dozens of countries to brainstorm how to protect and monitor the global food supply from terrorism. The 4th symposium will again be held in Kansas City next April 26-28. “It would be foolish to think that Al Qaeda doesn’t have the resources and skill sets to develop pathogenic bacteria” that it could use to contaminate food stuffs, an official told *HSToday.us*.

#### Terrorists could target airports resulting in rapid worldwide spread, empirically proven by SARS

**Committee on Assessment of Security Technologies for Transportation, 2006**(“Defending the U.S. Air Transportation System Against Chemical and Biological Threats”, December 1, http://www.nap.edu/openbook.php?record\_id=11556&page=1) Megan

Historically, most terrorist attacks on civilian targets have involved the use of firearms or explosives, and current defensive strategies are aimed at preventing attacks perpetrated by such means. However, **the use of** the nerve agent **sarin in 1995 to attack the Tokyo subway system, the use of the U.S. mail in 2001 to distribute** letters containing **anthrax** spores, **and the discovery in 2004 of the biological toxin ricin in U.S. Senate** Office **Buildings** in Washington, D.C., **demonstrate that chemical and biological agents have been added to terrorists’ arsenals**. Attacks involving chemical/biological agents are of great concern, not only because of the potential for mass casualties but also because there is no strategy or technology fielded today that can respond adequately to this threat. As the United States and other countries reassess the security measures they have in place to prevent or defend against such attacks (particularly in areas where large numbers of people gather and then widely disperse), **the risks to the air transportation system as a primary target become clear**. While potential attacks on all modes of transportation are of concern, the Committee on Assessment of Security Technologies for Transportation believes that the U.S. air transportation system continues to have a high priority for counterterrorism resources, both because of its economic importance and because of the intensified public perception of risk following the September 11, 2001, attacks. The air transportation system can also serve as a testbed for the development of defensive technologies and strategies that can subsequently be applied to other transportation modes. **The large numbers of people gathered in air terminals**—perpetually coming and going—**provide anonymity to the terrorist, and the fact that most passengers carry luggage makes the detection of threat agents concealed in luggage more difficult**. **The rapid dispersal of passengers from air terminals to destinations around the world means that those who become infected with communicable diseases could spread the diseases widely in a short time, a situation that was demonstrated in 2003 in the case of** the severe acute respiratory syndrome (**SARS**) virus. Finally, **a chemical/biological attack on the U.S. air transportation system** would raise the already high level of public anxiety about travel risks and **would** likely **result in significant economic disruption.**

#### Airports uniquely vulnerable to bioterror attacks

**Farr 04** – ResearchAnalyst for Frost&Sullivan (Matthew, “Chemical Detection vs. Biological Detection Strategies” 6/30/04 < http://www.frost.com/prod/servlet/market-insight-top.pag?docid=20844192>//AB)

Biological weapons are often mentioned in the same sentence as chemical weapons. However, **biological weapons are potentially the deadliest of all the weapons of mass destruction**. The quantities required for some of these weapons are microscopic. World War I killed 15 million people; the Spanish Flu of 1918 killed 40-60 million people. However, because of the time, resources and expertise required to obtain the pre-cursor agents, weaponize the agents and finally devise an effective delivery method, biological weapons are an unlikely option for all but nation-states. Biological weapons take days, weeks or longer to show signs of exposure. The commonly held fear is a **suicide bomber will infect his/herself with a biological agent that takes a couple of days to manifest and fly to the airport** of London, New York, Paris etc… This would allow a **terrorist to spread a virus worldwide** without having to plan an attack, weaponize the agent or develop a mode of delivery.

#### Bioterror is an existential risk

**Matheny 07** - research associate at Oxford University (Jason G., “Reducing the Risk of Human Extinction”. November 5, 2007; < http://www.physics.harvard.edu/~wilson/pmpmta/Mahoney\_extinction.pdf>//AB)

**Of current extinction risks, the most severe may be bioterrorism. The knowledge needed to engineer a virus is modest compared to that needed to build a nuclear weapon; the necessary equipment and materials are increasingly accessible and because biological agents are self-replicating, a weapon can have an exponential effect on a population** (Warrick, 2006; Williams, 2006).5 Current U.S. biodefense efforts are funded at $5 billion per year to develop and stockpile new drugs and vaccines, monitor biological agents and emerging diseases, and strengthen the capacities of local health systems to respond to pandemics (Lam, Franco, & Shuler, 2006).

### Bomb Detection Add-On

#### There is a lack of AIP funding for bomb detection now leaving airports vulnerable

**GAO 05**

United States, Subcommittee on Homeland Security, Government Accountability Office, Committee on Appropriations, Congress, House (Aviation security systematic planning needed to optimize the deployment of checked baggage screening systems, 3/15, http://books.google.com/booksid=H1b7qdMj9lcC&pg=PA13&lpg=PA13&dq=aip+baggage+screening&source=bl&ots=ztMYNnVQor&sig=ZCOf38rMjWRyh2Mh7X4M0ZBAhdo&hl=en&sa=X&ei=TWjjT7OLPIHM9QTyp5GGCA&ved=0CE0Q6AEwAQ#v)//MSO

Airport officials at over half of the 45 airports that we identified are in the process of planning or constructing of in-line systems stated that they will require federal funding in order to complete the planning and construction of these in-line systems Despite this reported need, however, the Presidents fiscal year 2005 and 2006 budget requests do not provide, and the fiscal year 2005 DHS Appropriations Act does not induce, funding for additional LOIS for in-line EDS baggage screening systems beyond the eight already installed. Also, the availability of federal funds from the Airport Improvement Program for future planning and construction of in-line baggage screening systems is limited In addition; perspectives differ regarding the appropriate role of the federal government, airport operators, and air carriers in funding these capital-intensive systems. Officials at 28 of the 45 airports that we identified in figure 5 as planning or constructing in-fine baggage screening systems stated that they could not or would not move forward with installing these systems without funding support from TSA. Also, in our review of correspondence to TSA regarding 26 airports' interest in receiving LOIS, officials from half of the 26 airports stated that they would have to delay, suspend, or abandon their plans for installing in-line systems until TSA committed to funding these projects. According to TSA officials, the high cost of developing final design plans for in-fine systems has resulted in airports delaying plans to install the systems until they are confident that TSA will be able to support their funding needs.

#### AIP funds can be used for explosives detection

**GAO 02** United States General Accounting Office (“Using Airport Grant Funds for Security Projects Has Affected Some Development Projects”, Report to the Committee on Transportation and Infrastructure, House of Representatives, October 2002, http://gao.gov/assets/240/236115.pdf)//MSO

Based on data provided by FAA, all of the security projects funded with AIP grants since the events of September 11, 2001, met the legislative and program eligibility requirements. The projects, which range from access control systems to terminal modifications, qualified for AIP funding either under eligibility requirements in effect before September 11, 2001, or under subsequent statutory and administrative changes. The Aviation and Transportation Security Act (ATSA), passed in November 2001, amended existing legislation governing AIP eligibility to permit funding for fiscal year 2002 of any security-related activity required by law or the Secretary of Transportation after September 11, 2001, and before October 1, 2002. This legislation also permits FAA to use AIP funds for replacing airport baggage systems and the reconfiguration of terminal baggage areas to accommodate explosives detection systems. In addition to these legislative changes, FAA issued new program guidance that clarified project eligibility requirements as defined in 49 U.S.C. Section 47102(3) to include, among other items, surveillance equipment, blast proofing of terminals, and explosives detection canines for use in terminals.

#### A terrorist attack causes US lash out and war

**Morgan 2001** Nicole Schwartz-Morgan, Assistant Professor of Politics and Economics at Royal Military College of Canada (10/10/2001, “Wild Globalization and Terrorism,” http://www.wfs.org/mmmorgan.htm)//

**The terrorist act can reactivate atavistic defense mechanisms** which drive us to gather around clan chieftans. **Nationalistic sentiment re-awakens, setting up an implacable frontier which divides "us" from "them,**" each group solidifying its cohesion in a rising hate/fear of the other group. (Remember Yugoslavia?) To be sure, the allies are trying for the moment to avoid the language of polarization, insisting that "this is not a war," that it is "not against Islam," "civilians will not be targeted." But the word "war" was pronounced, a word heavy with significance which forces the issue of partisanship. And it must be understood that the sentiment of partisanship, of belonging to the group, is one of the strongest of human emotions. **Because the enemy has been named in the media (Islam), the situation has become emotionally volatile. Another spectacular attack, coming on top of an economic recession could easily radicalize the latent attitudes of the United States, and also of Europe,** where racial prejudices are especially close to the surface and ask no more than a pretext to burst out. **This is the Sarajevo syndrome: an isolated act of madness becomes the pretext for a war that is just as mad, made of ancestral rancor, measureless ambitions, and armies in search of a war. We should not be fooled by our expressions of good will** and charity toward the innocent victims of this or other distant wars. It is our own comfortable circumstances which permit us these benevolent sentiments. If conditions change so that poverty and famine put the fear of starvation in our guts, the human beast will reappear. And **if epidemic becomes a clear and present danger, fear will unleash hatred**in the land of the free**, flinging missiles indiscriminately toward any supposed havens of the unseen enemy**. And **on the other side, no matter how profoundly complex and differentiated Islamic nations** and tribes **may be, they will be forced to behave as one clan by those who see advantage in radicalizing the conflict**, whether they be themselves merchants or terrorists.

# Environment Extensions

#### Aviation contributes substantially to global warming

**Capoccitti, Khare, Mildenberger 10 –** Manager/Sales & Strategy for Air Canada, Chair/professor of the Dept of Finance, Economics & Operations Management at Athabasca University, PhD Business Administration/Economics and law from Johannes Gutenberg-Universitat Mainz (Sam, Anshuman, Udo, “Aviation Industry – Mitigating Cliate Change Impacts through Technology and Policy,” Journal of Technology management & innovation, 2010, http://www.scielo.cl/scielo.php?pid=S0718-27242010000200006&script=sci\_arttext)//JS

However, **the aviation industry is not immune to the impact it has on climate change**. **As the aviation skies continue to crowd so does the impact of CO2 emissions**. The aviation industry is responsible but for a small but growing proportion of GHG emissions. **Aircraft are responsible for around three percent of global carbon dioxide emissions. But emissions of nitrous oxides** (NOx) **and the formation of condensation trails** (contrails) **from water vapour** at near stratospheric levels where commercial jets fly **mean the actual impact on global warming is much higher *-*possibly as much as ten percent** (GLOBE-Net, 2007). **Air Travel is the world's fastest growing source of greenhouse gases like carbon dioxide, which cause climate change.** Globally the world's commercial jet aircraft fleet generates more than 700 million tons of carbon dioxide (CO2), the world's major greenhouse gases, per year. **One person flying a return trip between Europe and New York generates between 1.5 and 2 tons of CO2. This is approximately the amount a European generates at home for heating and electricity in one year** (GreenSkies, n.d). Crowded skies translate to more flights which equates to more consumption and waste. **Consuming more in the aviation industry equates to more greenhouse gas emissions which negatively adds to global warming.** North America and Europe are at greatest risk as 70 to 80 % of all global flights operate within these two regions (GreenSkies, n.d.; pg.2; Kirby, 2008; pg. 32). Aviation is responsible for 2% of global CO2 emissions and by 2050 is predicated to represent 3% (IATA, 2008). Further, as more people in countries like China are able to afford airline tickets, worldwide air tourism travel is bound to increase. Most experts believe that air travel could double within fifteen years if current trends persist. **By 2050, the Intergovernmental Panel on Climate Change (IPCC) believes that aircraft could account for up to 15% of the global warming impact from all human activities** (GLOBE-Net, 2007). Just like consumption of more goods demands a lot of energy, getting from one place to another does too. Transportation as an industry consumes about 20% of the global energy supply, 80% of which comes from fossil fuels. He states that 80% of transport-related greenhouse gas emissions come from road transport. Seven percent is related to sea transport and 0.5% is attributed to rail. Air transportation is the second largest with a 13% share of transport-related greenhouse gas emissions (Kirby, 2008; pg. 35-36). Aviation plays a vital role in society as demonstrated above; it generates jobs and supports commercial and private travel. However one of the negative impacts of travel is its environmental impact associated with local noise and air pollution. A number of aircraft emissions can affect climate, carbon dioxide (CO2), Nitrogen oxides (NOx), and water (H2O) do so directly.

#### Air transport substantially contribute to climate change

Walsh, 2007 – Editor of TIME magazine (Bryan, “Does Flying harm the Planet”, TIME World, August 20, 2007, http://www.time.com/time/world/article/0,8599,1654488,00.html) // GKoo

Even as carbon emissions from air travel grow rapidly, scientists are investigating claims that they may double the warming effect because of the altitude at which they're emitted. As jets soar they leave behind contrails, vapor threads of condensation that can persist for hours, especially in colder areas, and behave like high-altitude cirrus clouds. Those clouds seem to have a net warming effect, trapping heat in the atmosphere. Planes also create ozone, a greenhouse gas that has a stronger warming effect at high altitudes than low. The science is still being nailed down, but the side effects of high-altitude emissions could double air travel's contributions to global warming, says Dan Lashof, science director for the Natural Resource Defense Council's Climate Center.

#### Aviation is a significant contributor to climate change

IBRD, 2012 – it’s the world bank dude (“Air Transport and Energy Efficiency”, The International Bank for Reconstruction and Development, February 2012, http://siteresources.worldbank.org/INTAIRTRANSPORT/Resources/TP38.pdf )//GKoo

Aviation has always caused environmental concerns. Initially, the focus of concern was on aviation noise and, for decades now, the industry has been working to reduce noise. According to Boeing and Airbus, aircraft are on average 50 percent quieter today than they were 10 years ago. It is estimated that the noise footprint of each new generation of aircraft is at least 15 percent lower than that of replaced aircraft. In recent years, the impact of aviation greenhouse gas emissions on the environment has been of increasing concern. Aviation produce approximately 2 percent of global Carbon Dioxide (CO2) emissions, according to the United Nations Intergovernmental Panel on Climate Change (IPCC 2007). Given the strong growth rate that aviation has enjoyed and will continue to enjoy in the future, as was discussed in the previous chapter, these concerns are justified. Four kinds of gases make up the main emissions from aviation: carbon dioxide (around 70 percent of total emissions), water vapor (around 30 percent), nitrogen oxide and sulfur oxide (less than one percent). In 2006, aviation emitted 810 million tons of CO2, which represents 12 percent of all transport CO2 emissions that year. The OECD forecasts that air transport CO2 emissions will grow to 23 percent of transportation CO2 emissions by 2050 if no measures are taken (Anming Zhang 2009).

#### Prefer our evidence – We assume aviation’s total impact on climate change

**Allen & Lichman 09 –** Law firm practicing airport development law and litigation emphasizing environmental matters (“Why the Airports and the Aviation Industry Need to Be Concerned About Climate Change: Part One, Facts about Aviation and Climate Change,” Aviation & Airport Development Law News, 9/24, http://www.aviationairportdevelopmentlaw.com/2009/09/articles/faa-1/regulatory/why-the-airports-and-the-aviation-industry-need-to-be-concerned-about-climate-change-part-one-facts-about-aviation-and-climate-change/#more)//JS

In [*Aviation and Climate Change: the Views of Aviation Industry Stakeholders*](http://www.airlines.org/NR/rdonlyres/4929FF19-BEA8-4683-8550-E9FC43953098/0/EnvPrincipleslogos022309.pdf), the aviation industry makes several claims regarding the impact aviation has on climate change. First, the industry claims that “over the past four decades, we have improved aircraft fuel efficiency by over 70 percent, resulting in tremendous savings.” As a result, the industry continues, “given the significance of fuel costs to the economic viability of our industry, our economic and environmental goals converge.” Second, the industry claims that “because of our aggressive pursuit of greater fuel efficiency, [greenhouse gas](http://en.wikipedia.org/wiki/Greenhouse_gas) (GHG) emissions from aviation constitute only a very small part of total U.S. GHGs, less than 3 percent.” However, in order to assist the industry in its obligation “to further limit aviation’s greenhouse gas footprint even as aviation grows to meet rising demand for transportation around the world,” those claims of progress need to come under a microscope. First, how much aviation contributes to climate change is still up to debate. Several governmental and aviation industry organizations have been reporting a “less than 3%” number for quite some time while environmental groups, particularly in Europe, claim that the percentage is anywhere from 5 to 9%. In examining the claims and counterclaims concerning emissions of GHG, one has to be very careful about the language and the metrics used in determining the “impact” any given industry will have on “climate change.” Many reports and studies focus only on CO2, since the amount of CO2 produced both naturally and by humans is overwhelming. However, as just about everyone knows by now, there are other gases and anthropogenic actions that exacerbate climate change. For example, the U.S. EPA recently proposed regulations that would require major emitters of six “greenhouse gases” to report their emissions to the EPA on an annual basis. Those six greenhouse gases are: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6), hydrofluorocarbons (HFCs), perfluorochemicals (PFCs), and other fluorinated 20 gases (e.g., nitrogen trifluoride and hydrofluorinated ethers (HFEs)). It also should be kept in mind when discussing climate change, especially with respect to aviation, that water vapor is estimate contribute anywhere from 36% to 72% of the greenhouse effect. This is important because the [radiative forcing effect](http://en.wikipedia.org/wiki/Radiative_forcing) of cirrus cloud formation from the aircraft is a significant contributor to the greenhouse effect. As pointed out above, it is generally accepted that for aviation the GHGs of concern are CO2, nitrogen oxides (NOx), aerosols and their precursors (soot and sulfate), and increased cloudiness in the form of persistent linear contrails and induced-cirrus cloudiness.  The predominance of CO2 as the GHG of concern leads to another issue: measurement of GHG. Many reports state their findings in terms of “[CO2e](http://en.wikipedia.org/wiki/CO2e),” or CO2 equivalent. Carbon dioxide equivalency is a quantity that describes, for a given mixture and amount of greenhouse gas, the amount of CO2 that would have the same global warming potential (GWP), when measured over a specified timescale (generally, 100 years). For example, the generally accepted GWP for methane over 100 years is 25 and for nitrous oxide 298. This means that emissions of 1 million metric tons of methane and nitrous oxide, respectively, is equivalent to emissions of 25 and 298 million metric tons of carbon dioxide. This article will keep the convention of designating GHG other than CO2 in terms of “CO2e.” Most reports and studies begin with the groundbreaking work of the [United Nation Intergovernmental Panel on Climate Change (IPCC)](http://www.ipcc.ch/ipccreports/sres/aviation/index.php?idp=0), which, in 1999 estimated that, based on earlier data, fuel combustion for aviation contributes approximately 2% to the total anthropogenic CO2 emissions inventory, and, if left unmitigated, this could grow to as much as 4% by 2050. Despite the age of the data, the 2% number has been used consistently throughout the first decade of the 21st century. The International Air Transport Association (IATA) in a 2006 press release relied on IPCC report by stating that “[a]ir transport contributes a small part of global CO2 emissions – 2%.” IATA press release , 2ndAviation Environment Summit. Even as recently as September, 2009, the Transportation Research Circular of the Transportation Research Board fudges the issue by stating in the section about climate change and greenhouse gases that “fuel combustion for aviation contributes approximately 2% to the total anthropogenic CO2 emissions inventory.” What these estimates leave aside is the fact that CO2 emissions are only one facet of the greenhouse gas equation.  The aviation industry tried to correct this in its paper *Aviation and Climate Change: Views of Aviation Industry Stakeholders*, published in February, 2009, by stating that “greenhouse gas (GHG) emissions from aviation constitute only a very small part of total U.S. GHGs, less than 3 percent.” However, the report that the paper cites to, the U.S. EPA’s[*Inventory of Greenhouse Gas Emissions and Sinks: 1990-2006*](http://www.epa.gov/climatechange/emissions/downloads/08_CR.pdf)(April 15, 2008) (2008 EPA Inventory), only mentions emissions of CO2 in its discussion of its inventory of greenhouse gases in the creation of energy. *See,* 2008 EPA Inventory, Chapter 3. Moreover, the EPA only examined the aviation sector’s combustion of fossil fuel, and did not, for example, take into account the radiative forcing effect of cirrus cloud formation has on climate change. When the EPA published its next inventory, [*Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007*](http://epa.gov/climatechange/emissions/downloads09/InventoryUSGhG1990-2007.pdf), (March 2009) (2009 EPA Inventory), the contribution of aviation to carbon dioxide emissions increased. It estimated that when international fuels were included, domestic and international commercial, military, and general aviation flights represented about 3.4 percent of the total emissions of CO2 in United States.  There is no question that the emission of CO2, and, for that matter, the combustion of fossil fuels, does not tell the whole story with respect to aviation. However, there are relatively few studies that focus solely on aviation and examine the effects of all GHGs and not just CO2. In 2005, Robert Sausen and a group of climate scientists published their article [*Aviation Radiative Forcing in 2000: An Update on IPCC (1999)*](http://docserver.ingentaconnect.com/deliver/connect/schweiz/09412948/v14n4/s13.pdf?expires=1253404014&id=52115010&titleid=1292&accname=Guest+User&checksum=75615ECAA9267BF5069293C288D77FDF) (Sausen 2005). That article concluded that when NOx emissions, contrails and cirrus clouds are added into the mix, aviation’s impact on climate change is about 2 to 5 greater than that of CO2 alone worldwide. This would mean that aviation would have an impact on climate change in the range of 4% to 10% when all aspects of emissions of GHG and other radiative forcing factors are taken into account. These numbers were updated in a July, 2009, article *Aviation and Global Climate Change in the 21st Century*(Lee *et al.*, 2009) which appeared in the periodical [*Atmospheric Environment*](http://www.elsevier.com/wps/find/journaldescription.cws_home/246/description#description)*.*The authors, a group of atmospheric scientists, concluded that when aviation-induced cirrus radiative forcing is included, aviation represents 4.9% of total anthropogenic “radiative forcing of climate.” While these studies are not United States specific, as the EPA inventories are, since these studies consider all GHGs emitted by aviation (not just carbon dioxide), are focused entirely on the climate effect of aviation, and are based more recent data, the conclusion that aviation contributes close to 5% of climate change is more accurate than the “under 2%” used by many in the aviation industry.

#### Tipping point coming, short term aviation emissions outweigh any other sources

Clark, 2012 - a consultant editor on the Guardian environment desk. He has written and edited a number of books on environmental and technology topics as well as working at BBC Worldwide (Duncan, “The surprisingly complex truth about planes and climate change “, The Guardian, September 9, 2010, <http://www.guardian.co.uk/environment/blog/2010/sep/09/carbon-emissions-planes-shipping>) // GKoo

We hear much about the environmental costs of air travel. As [our recent Q&A](http://www.guardian.co.uk/environment/2010/apr/06/aviation-q-and-a) explained, the problem is not just that planes burn a lot of fuel and therefore kick out plenty of CO2 per passenger. Just as important are a host of other high-altitude impacts, including vapour trails and ozone production, that are usually estimated to cause as much warming as the CO2 itself. Hence we often hear that although air travel accounts for only a small fraction of global emissions (relatively few people can afford to fly), one transatlantic flight can add as much to your carbon footprint as a typical year's worth of driving. Surely it couldn't get any worse, could it? Unfortunately for green-minded air travellers, it just did. Kind of. The wrinkle, always vaguely understood by climate geeks but finally explored in depth in a [recent scientific paper](http://pubs.acs.org/doi/full/10.1021/es9039693), is that the relative impact of different types of travel depends not just on practical factors such as engine efficiency and occupancy rates, but also on something altogether more abstract: the time frame you care about. The reason this is so crucial is that the effects of different greenhouse gases play out in the atmosphere at a different speeds. CO2, released by all fuel-burning vehicles, can remain in the air for centuries, causing a gentle warming effect. By contrast, most other gases and impacts – such as the vapour trails and tropospheric ozone produced by planes at altitude – cause much more potent but shorter-lived bursts of warming. If you'll forgive an extension to the "frying the planet" metaphor, generating global warming with CO2 is equivalent to slow-cooking the earth in a cast-iron skillet, whereas cooking the planet with vapour trails would be more like flash-frying it in an extra-hot wok. In order to tot up these differently paced warming impacts into a single carbon footprint number for a flight or any other activity, it's necessary to decide what time frame you're talking about. Conventional wisdom is to add up the total warming impact of all the different greenhouse gases over the period of a century to create a nice, round but ultimately arbitrary number. If, by contrast, we shifted the focus to a much shorter time period – which arguably would make more sense, given that the next decade or so could turn out to be make-or-break in terms of avoiding climate tipping points – then the impact of vapour trails and other short-lived impacts look massively more significant. At risk of over-stretching the frying-pans analogy, the flash-fry wok may be more likely to cause a disastrous kitchen fire than the slow-cook skillet, even if they both use the same amount of heat overall. The new paper, published in the journal [Environmental Science and Technology](http://pubs.acs.org/journal/esthag), finally pins some numbers on all this theory by examining the impact over different time periods of various different modes of transport. The results are illuminating. According to the paper, if we focus just on the impact over the next five years, then planes currently account for more global warming than all the cars on the world's roads – a stark reversal of the usual comparison. Per passenger mile, things are even more marked: flying turns out to be on average 50 times worse than driving in terms of a five-year warming impact.

#### Airports are reluctant to finance green tech – carbon free future is impossible without government investment

**Kivitis, Charles, and Ryan, 2009** - Graduate College of Management, Southern Cross University, Tweed Gold Coast, Australia Pro Vice-Chancellor (Research), Southern Cross University, Tweed Gold Coast, Australia (Robbert, Michael, Neal, “A Post-Carbon Aviation Future:

Airports and the Transition to a Cleaner Aviation Sector”, Southern Cross University, November 10, 2009, <http://www.airportmetropolis.qut.edu.au/publications/documents/Kivits_et_al__Post_carbon_aviation_future_doc.pdf> //GKoo

The current propulsion technology used by commercial aircraft will be challenged by the introduction of emissions trading schemes targeting transport, in addition to the imminent reality of peak oil production, with its consequent impact on oil price. Although the **petroleum-fuelled jet turbine has dominated commercial aircraft propulsion since the 1960s, it is uncertain whether incremental changes to the existing technological and infrastructural paradigm**, as signalled in a recent article by Charles et al. [1] in this journal, **will be sufficient to address these challenges. In a post-carbon future, existing transport infrastructures will emerge as increasingly inadequate.** It is also possible that existing infrastructure owners, such as **airports,** many of which are fully privatized, **will be reluctant to finance and accommodate the infrastructure required** for future air transport operations, an especially opportune topic given recent concerns that the owners of privatized airports are ignoring government proposals to enhance operational capacity through the provision of new infrastructure, thereby limiting regional and national economic growth [2].

#### Government involvement is key to an effective airport infrastructure that can address carbon emissions – plan results in carbon-neutral growth

**IATA, 2009** - The International Air Transport Association represents 230 international member airlines in 125 countries (“Aviation and Climate Change”, IATA, July 2009, <http://www.iata.org/SiteCollectionDocuments/AviationClimateChange_PathwayTo2020_email.pdf> //Gkoo

**Carbon-neutral growth** (CNG**) is a fundamental milestone on the route towards a zero carbon future for aviation**. It ensures that aviation’s net CO2 emissions stop growing, even when demand for air transport continues to grow. **The achievement of CNG** thus **responsibly balances the contribution made by a sustainable, competitive and healthy aviation sector** to the global **economy with the urgent challenge of combating climate change**. Airlines are the first global industry to make such a bold commitment. To achieve it, **a multi-faceted approach is required with a strong commitment from all aviation stakeholders**: airlines, manufacturers, fuel suppliers, airports, air navigation service providers **and governments.** **The need for the airline industry to continue to have the capacity to invest in emissions mitigation measures must be central to any approach.** Key drivers towards achieving carbon-neutral growth, as well as the associated CO2 benefits and required capital expenditures, are summarized as follows: Fleet renewal – Airlines will likely need to spend $1.5 trillion on new aircraft by 2020, which will result in a 21% reduction in CO2 emissions compared to a scenario without fleet renewal. This means 5,500 aircraft will be replaced by 2020, or 27% of the total fleet. • Operations – Improved operational practices, including reduced APU (auxiliary power unit) usage, more efficient flight procedures, and weight reduction measures, will achieve 3% emissions reductions by 2020. The related costs are estimated at $1 billion. • Infrastructure – **Full implementation of** more efficient ATM (air traffic management) and **airport infrastructure could provide an additional 4% emissions reduction globally by 2020, while benefits could be as high as 10% in some regions**. The Single European Sky (SES/ SESAR; 70% cut in route extension), Next Generation ATM in the USA (57% delay reduction), Pearl River Delta, RVSM (reduced vertical separation minima) over Russia, flex tracks, etc., would require investments of $58 billion. • Engine retrofits & airframe technology – Modifications to the existing fleet using current technologies (winglets, drag reduction, etc.) could achieve an extra 1% emissions reduction by 2020 for an estimated investment of $2 billion. • Biofuels – Recent tests on biofuels have demonstrated that a reduction of 80% of CO2 emissions, on a full carbon life-cycle basis, can be achieved. Assuming availability of a 6% mix of 2nd generation (sustainable) biofuels by 2020, this would reduce aviation CO2 emissions by a further 5%, requiring industry and government investment of $100 billion. IATA has set a target to be using 10% alternative fuels by 2017. • Offset mechanisms - In order to “close the gap”, 90 million tonnes of CO2 will need to be offset by 2025 to mitigate emissions to 2020 levels and achieve carbonneutral growth. By 2025, this will cost an additional $7 billion per year to achieve.

#### AIP funds the Voluntary Airport Low Emissions program – k2 alternative fuel infrastructure and green energy

Kirk 09 – Specialist in Transportation Policy (Robert S., “Airport Improvement Program (AIP): Reauthorization Issues for Congress”, May 29, 2009, Congressional Research Service, http://www.fas.org/sgp/crs/misc/R40608.pdf)//IIN

Vision 100, directed the FAA to establish a national program to reduce airport ground emissions at commercial service airports located in air quality nonattainment and maintenance areas (currently, roughly 530 airports can participate). The Voluntary Airport Low Emissions (VALE) program allows airport sponsors to use Airport Improvement Program (AIP) grants and Passenger Facility Charge (PFC) funds to help finance the purchase of low emissions vehicles, refueling and recharging stations, gate electrification, and other airport air quality improvements.58 VALE is restricted to financing capital improvements and cannot pay for operations or maintenance costs such as fuel purchases. The range of VALE uses for PFC funding is broader than those allowable under AIP. For example, AIP funds are limited to vehicles and infrastructure for “alternative fuel” use as defined by the Department of Energy, whereas the PFC program allows for use of clean conventional fuels. Significantly, VALE program funding is restricted to the “incremental” cost differential between the higher priced low-emission vehicle and the lower price of a conventional fuel vehicle. Retaining, changing, or eliminating these restrictions or eligibility criteria could be considered during reauthorization.59

#### AIP is the funding mechanism to VALE—key to clean tech, air quality, natural gas and alternative fuels

**FAA 10**— operating mode of the DOT (Federal Aviation Agency, 10/28/2010, “Fact Sheet – Voluntary Airport Low Emission Program

”, FAA, http://www.faa.gov/news/fact\_sheets/news\_story.cfm?newsId=12082)// BWang

The Federal Aviation Administration’s (FAA) Voluntary Airport Low Emission Program (VALE) is a national program designed to reduce all sources of airport ground emissions. Congress created the program in 2004 to help airport sponsors meet their state-related air quality responsibilities under the Clean Air Act. It is funded through the Airport Improvement Program and Passenger Facility Charges. The VALE program is available to commercial service airports located in poor air quality areas of the country. The Environmental Protection Agency conducts air quality tests around the country and the measurements taken determine which areas have poor air quality and require mitigation. The program can be used to fund clean technology that the FAA has validated as being cost effective. The VALE program allows airport sponsors to take proactive steps to improve air quality at their facilities. Projects can range from the purchase of low-emission vehicles to major infrastructure improvements. Examples of previously funded projects include: cleaner technology for vehicles and stationary equipment; electric ground support equipment like bag tugs and belt loaders; natural gas refueling stations for airport buses and shuttles; gate electrification; and alternative fuel systems including geothermal and solar. In fiscal year 2010, the FAA provided VALE grants for 14 projects at 12 airports for low-emission projects, some of them similar to the Sea-Tac project to install a centralized preconditioned air plant. Since 2005, the FAA has funded 40 low-emission projects at 22 airports, representing a total investment of $108 million dollars ($83 million in federal grants and $25 million in local airport matching funds). Through VALE, airports have reduced ozone emissions by 5,500 tons which is the equivalent of removing 13,500 cars and trucks off the road every year for the next 10 years.

#### Funding VALE solves emissions

**FAA 12** (The Federal Aviation Administration, Fact Sheet – Voluntary Airport Low Emission Program, February 3, 2012, http://www.faa.gov/news/fact\_sheets/news\_story.cfm?newsId=13172)//LP

VALE allows airport sponsors to take proactive steps to improve air quality at their facilities. Projects can range from the purchase of low-emission vehicles to major infrastructure improvements. Examples of previously funded projects include: preconditioned air units, electric ground support equipment like bag tugs and belt loaders; natural gas refueling stations for airport buses and shuttles; gate electrification; and alternative fuel systems including geothermal systems and solar facilities. In fiscal year 2011, the FAA issued VALE grants for 12 projects at 11 airports for low-emission projects. Since 2005, the FAA has funded 52 low-emission projects at 30 airports representing a total investment of $138 million ($109 million in federal grants and $29 million in local airport matching funds) in clean airport technology. Through VALE, airports are reducing ozone emissions by approximately 320 tons per year, which is the equivalent to removing 17,600 cars and trucks off the road annually.

#### Investment solves infrastructure inefficiencies

IBRD, 2012 – it’s the world bank dude (“Air Transport and Energy Efficiency”, The International Bank for Reconstruction and Development, February 2012, http://siteresources.worldbank.org/INTAIRTRANSPORT/Resources/TP38.pdf )//GKoo

Investment in infrastructure and modern mobile equipment can greatly enhance the fuel efficiency **and reduce the number of vehicles moving around the terminals and aprons of airports.** Actions to address energy efficiency could include: Replacing old Fleet Vehicles with modern, more fuel-efficient models, such as hybrid cars; Replacing gasoline or diesel vehicles with alternatively fuelled vehicles using compressed natural gas (CNG), liquid petroleum gas (LPG), liquid hydrogen, electricity or compressed air; Providing infrastructure to refuel alternatively fuelled vehicles operated by both the airport and tenants; Replacing fuel trucks with built-in fuel hydrant distributions systems; Installing built-in fixed electrical ground power (FEGP) and pre-conditioned air (PCA) units at terminal gates and air bridges to eliminate the need for diesel-powered portable equipment and the vehicles needed to tow them into position; Replacing buses that move passengers between terminals with Automated People Movers (APM).

#### Failure to address the environmental impacts of air transportation will constrain the industry and crush military readiness

**Waitz et. Al , 2004** – Professor and PARTNER Director at the Massachusetts Institute of Technology (Ian, “AVIATION AND THE ENVIRONMENT”, Partnership for AiR Transportation Noise and Emissions Reduction, December 2004, [http://web.mit.edu/aeroastro/partner/reports/congrept\_aviation\_envirn.pdf)//](http://web.mit.edu/aeroastro/partner/reports/congrept_aviation_envirn.pdf)/) GKoo

Aviation is a critical part of our national economy, providing for the movement of people and goods throughout the world, enabling our economic growth. In the last 35 years there has been a six-fold increase in the mobility provided by the U.S. air transportation system. At the same time there has been a 60% improvement in aircraft fuel efficiency and a 95% reduction in the number of people impacted by aircraft noise. Despite this progress, and despite aviation’s relatively small environmental impact in the United States, **there is a compelling and urgent need to address the environmental effects of air transportation. Because of strong growth in demand, emissions of some pollutants from aviation are increasing** against a background of emissions reductions from many other sources. In addition, progress on noise reduction has slowed. Millions of people are adversely affected by these side effects of aviation**. As a result** of these factors and the rising value being placed on environmental quality, **there are increasing constraints on the mobility, economic vitality and security of the nation. Airport expansion plans have been delayed or canceled due to concerns over local air quality, water quality and community noise impacts. Military readiness is challenged by restrictions on operations**. These effects are anticipated to grow as the economy and demand for air transportation grow. **If not addressed, environmental impacts may well be the fundamental constraint on air transportation growth in the 21st century**. The concerns extend well beyond American shores. For example, within the European Union (EU) the climate impacts of aviation are identified as the most significant adverse impact of aviation, in contrast to the United States and many other nations where air quality and noise are the current focus of attention. As a result, there are increasing EU calls for regulation—trading, taxes and charges, demand management and reduced reliance on aviation—even though there is large uncertainty in the understanding of the climate effects of aircraft and appropriate means to mitigate these effects. **Despite the importance of this issue, the U**nited **S**tates **does not have a significant research program to assess the potential impacts of aviation on climate**. This may put the United States at a disadvantage in evaluating technological, operational and policy options, and in negotiating appropriate regulations and standards with other nations. The international concerns will continue to grow with the strong increase in air transportation demand anticipated for Asia. **Immediate, focused action is required** to address the interdependent challenges of aviation noise, local air quality and climate impacts. Not acting, as stated above, will not only affect millions of Americans living near airports but will adversely impact the vitality and security of our nation. A national vision and strategic plan of action are required.

### AT: ETS CP

#### Emissions tax system would actually make global warming worse – doesn’t address all of aviation’s contributions to climate change – EU ETS proves

**Hospodka 11 –** Ing. Bc. Ph.D. at the department of air transport at the Czech Technical University (Jakub, “Critical Issues of Inclusion of Aviation in EU Emissions Trading System,” World Academy of Science, Engineering and Technology, http://www.waset.org/journals/waset/v59/v59-67.pdf)//JS

A more important issue seems to be the problem of radiative forcing from different sources , not only from CO2 emissions. The basis of this problem is the fact that all **EU ETS** legislative documents and all directives **deal only with the decrease production greenhouse gases production and stabilization of the emitted amount into the atmosphere**. In fact, the decrease in greenhouse gases should not be the goal but only a device to achieve a real goal. **The real aim should** obviously **be the reduction of atmospheric warming. Only one third of the aviation contribution to atmospheric warming is caused by CO2 emissions. Contrails and induced cloudiness have a greater effect than CO2** . However, **contrails and induced cloudiness are not taken into account anywhere in EU ETS. Not including such an important effect** as induced cloudiness **can lead to a dangerous situation where we will be able to reduce emissions of CO2 but this reduction will have an opposite effect on contrails and induced cloudiness, which will as a result lead to an overall increase in temperature, even when all standards of EU ETS will are fulfilled.**

# Generic Solvency/FYIs

#### Funds distributed according to priority – our advantage areas would be high priority

**FAA 2012** ­– National Aviation Authority of the Us (Federal Aviation Administration, “AIP Sponsor Guide,” 4/19, About FAA, http://www.faa.gov/airports/central/aip/sponsor\_guide/media/0100.pdf)//JS

**Because the demand for AIP funds exceeds the availability, the FAA bases the distribution of limited AIP funds on current national priorities and objectives. Projects that rate a high priority will receive higher consideration for funding** over those projects with lower priority ratings. Each fiscal year, the FAA apportions AIP funds into major entitlement categories such as enplanements, non-primary, and state apportionment funds. The FAA distributes the remaining funds to a discretionary fund. Set-aside projects (Airport noise and the Military Airport Program) receive first attention from this distribution. The **funds that remain after the set-asides are** true **discretionary funds the FAA distributes based on a national prioritization system.** The FAA distributes discretionary funds to projects that best carry out the purpose of the AIP, **with highest priority given to safety, security, reconstruction, capacity and standards.**

#### AIP is the best funding mechanism to improve airports – national needs are prioritized

**Kirk 9** – Specialist in Transportation Policy(Robert S. Kirk, “Airport Improvement Program(AIP): Reauthorization Issues for Congress” Congressional Research Service, 29 May 2009, http://www.fas.org/sgp/crs/misc/R40608.pdf)//FK

The AIP provides federal grants to airports for airport development and planning. The airports participating in the AIP range from very large publicly-owned primary commercial service airports to small public use general aviation airports that may be privately-owned (but are required under AIP to be available for public use). As mentioned earlier, AIP funding is usually limited to construction or improvements related to aircraft operations, such as runways and taxiways. Commercial revenue producing facilities are generally not eligible for AIP funding, nor are operational costs. 26 The structure of AIP funds distribution reflects legislatively set national priorities and objectives of assuring airport safety and security, stimulating capacity building, reducing congestion, helping fund noise and environmental mitigation costs, and financing small state and community airports. There is less federal involvement in the four other sources of airport development funds. The main financial advantage of AIP to airports is that, as a grant program, it can provide funds for a known range of capital projects without the financial burden placed on airports by bond or other debt financing. Limitations on the use of AIP grants include the range of projects that AIP can fund and the requirement that airports adhere to all program regulations and grant assurances

#### **Funding FYI**

Kirk 03 – resources, sciences, and industry department (Robert S., “Airport Improvement Program”, CRS Web, June 2nd 2003, CRS Issue Brief for Congress, http://assets.opencrs.com/rpts/IB10026\_20030602.pdf)//IIN

AIP Funding Distribution The distribution system for AIP grants is complex. It is based on a combination of formula grants (also referred to as apportionments) and discretionary funds. Each year formula grants are apportioned automatically to specific airports or types of airports including primary airports, cargo service airports, general aviation airports, and Alaska airports. Formula and Discretionary Funds. Formula Funds. Sometimes referred to as apportionments, these funds are apportioned by formula or percentage. Formula funds may generally be used for any eligible airport or planning project. Formula funds are divided into four categories, primary airports, cargo service airports, general aviation airports, and Alaska supplemental funds. Each category distributes AIP funds by a different formula. Most airports have up to three years to use their apportionments. Non-hub commercial service airports (the smallest of the primary airports) have up to four years. Primary Airports. The apportionment for primary airports is based on the number of passenger boardings made at the airport during the prior calendar year. The amount apportioned for each fiscal year is equal to double the amount that would be received according to the following formulas: ! $7.80 for each of the first 50,000 passenger boardings; ! $5.20 for each of the next 50,000 passenger boardings; ! $2.60 for each of the next 400,000 passenger boardings; ! $0.65 for each of the next 500,000 passenger boardings; and ! $0.50 for each passenger boarding in excess of 1 million. The minimum formula allocation is $1 million. The maximum is $26 million. New airports receive the minimum for their first fiscal year of operation. Cargo Service Airports. 3% of AIP funds are apportioned to cargo service airports. The allocation formula is the proportion of the individual airport’s landed weight to the total landed weight at all cargo service airports. General Aviation Airports. 20% of AIP funds are to be apportioned for use at general aviation and reliever airports. From this share, all airports, excluding all non-reliever primary airports, receive the lessor of: ! $150,000; or ! one fifth of the estimated 5-year costs published in the most recent National Plan of Integrated Airport Systems (NPIAS) to a maximum of $200,000 per year. Any remaining funds would be distributed based on state-based population and area formulas. Alaska Supplemental Funds. Funds are apportioned to Alaska to assure that Alaskan airports receive at least as much as they did under the ADAP in 1980. AIR21 doubled the Alaska Supplemental. Forgone Apportionments. Large and medium hub airports that collect a passenger facility charge of $3 or less have their AIP apportionments reduced by an amount equal to 50% of their projected PFC revenue for the fiscal year until they have forgone (sometimes referred to as a “give back”) 50% of their AIP formula grants. In the case of a fee above the $3 level the percentage forgone is 75%. The implementation of the reduction is not imposed until the first fiscal year following the calendar year in which the PFC is first imposed. A special small airport fund gets 87.5% of these forgone funds. The discretionary fund gets the remaining 12.5%. Discretionary Funding. The discretionary fund (49 U.S.C. sec. 47115-47117) includes the money not distributed under the apportioned entitlements as well as, the forgone PFC revenues that were not deposited into the Small Airport Fund. Discretionary grants are approved by the FAA based on project priority and other selection criteria, including congressional directives in appropriations legislation. Despite its name, the discretionary fund is subject to three set-asides and certain other spending criteria. The three set-asides are: Airport Noise Set-Aside. At least 34% of discretionary grants are set-aside for noise compatibility planning and for carrying out noise abatement and compatibility programs. Military Airport Program (MAP). At least 4% of discretionary funds are set-aside for conversion and dual use of current and former military airports. 15 airports may participate. Grants for Reliever Airports. There is a discretionary set-aside of 2/3 of 1% for reliever airports in metropolitan areas suffering from flight delays. The Secretary of Transportation is also directed to see that 75% of the grants made from the discretionary fund are used to preserve and enhance capacity, safety and security at primary and reliever airports, and also to carry out airport noise compatibility planning and programs at these airports. Subject to these limitations, the three set-asides, or priority directives from the appropriation committees (referred to by some as “place naming”), the Secretary, through the FAA, has discretion in the distribution of grants from the remainder of the discretionary fund. The Federal Share of AIP Matching Funds. For AIP development projects, the federal government share differs depending on the type of airport. The federal share, whether funded by formula or discretionary grants, is as follows: ! 75% for large and medium hub airports (80% for noise compatibility projects); ! 90% for other airports; and ! 90% for integrated airport system planning grants; ! “not more than” 90% for airport projects in states participating in the state block grant program; ! 40% for projects funded from the discretionary fund at airports receiving exemptions under section 47134, the pilot program for private ownership of airports; The airports themselves must raise the remaining share from other sources. Unlike federal aid to highways, AIP grants generally go directly to airports rather than through the states. This federal share regime means that smaller airports do not pay as high a percentage of AIP project costs as large and medium airports do. These are fixed percentages with the above mentioned exception of the state block grant states. Distribution of AIP Grants by Airport Size. The appropriateness of the distribution of grants among airports of different size has, at times, been a source of debate (for airport definitions see CRS Report RL30096, p. 11). It is important to keep in mind that although smaller airports’ individual grants are much smaller than the grants going to large and medium hub airports, the smaller airports are much more dependent on AIP to meet their capital needs. Based on 1996 data, a GAO report (GAO/RCED-98-71) found that about 10% of large and medium airports’ capital funding comes from AIP, contrasting with just over 50% for airports smaller than medium hub. (For graphic presentations of airport funding sources, see U.S. General Accounting Office (GAO). Airport Financing: Funding Sources for Airport Development, GAO/RCED-98-71. 1998. 52 p.) A recent GAO report (GAO-02- 283) found, for the years FY1996 through FY1999, grants to small airports (small hub and smaller) grew 56% while grants to large and medium hub airports grew only 24%, indicating that AIP was becoming increasingly important to small airports. AIR21 continued this trend and raised the percentage share for smaller airports. This is because large and medium hub airports now forego 75% of their AIP formula funds in return for the ability to impose PFCs at the $4.50 level.

#### FYI – Normal means for AIP funding

Bennett 99 (Grant D., “Funding Airport Infrastructure: Federal Options for Solvency”, Journal of Engineering and Public Policy, August 5th, 1999, http://www.wise-intern.org/journal/1999/index.html)//IIN

The NPIAS confirms this fact with recommendations that regular maintenance is needed for airfield pavement.17 Although current pavement conditions are not terrible, the NPIAS credits funding from thousands of local and state agencies for these conditions.18 In addition to cost savings and flight delays, **s**afety is also addressed by infrastructure funding because federal money requires specific standards be used in airport development. The NPIAS says uniformity, with regards to infrastructure, helps promote safety and that federal funds ensure uniformity.19 Experts throughout aviation argue that new infrastructure funding is necessary to increase capacity and safety, and reduce flight delays. Federal Funding Role Funding for the FAA primarily comes from the Aviation Trust Fund. In 1970 the Congress passed the Airport and Airway Revenue Act to establish the Aviation Trust Fund, which allowed the FAA to implement a series of user fees and gas taxes related to aviation as a source of revenue.20 The Aviation Trust Fund then finances the FAA along with help from the general fund of the U.S. government. The appropriations to the FAA for fiscal year 1999 include $1.6 billion for the Airport Improvement Program, $1.9 billion for facilities and equipment, $150 million for research, engineering and development and $4.1 billion for FAA operations. The federal government general fund contributes approximately 26% of the FAA operations budget.21 Airport Improvement Program

#### FYI - Normal means for funding

**FAA, 2012**(Federal Aviation Administration, “Airport and Airway Trust Fund”, http://www.faa.gov/about/office\_org/headquarters\_offices/apl/aatf/) Megan

The Federal Aviation Administration (FAA) is funded primarily by the Airport and Airway Trust Fund (Trust Fund or AATF) which receives revenues from a series of excise taxes paid by users of the national airspace system — and by the General Fund. The Airport and Airway Revenue Act of 1970 created the Trust Fund to provide a dedicated source of funding for the aviation system independent of the General Fund. The Trust Fund's purpose was to establish sources of funding that would increase concurrently with the use of the system, and assure timely and long-term commitments to capacity increases. The Trust Fund was designed to finance investments in the airport and airway system and, to the extent funds were available, cover the operating costs of the airway system as well. Trust Fund revenues are derived from excise taxes on: Domestic airline passenger tickets Domestic airline passenger flight segments International passenger arrivals and departures Air cargo waybills Aviation fuels Amounts paid for the right to provide mileage awards The Current Aviation Excise Tax Structure and Rates (PDF) (PDF) provides current and historical tax rates. The largest source of excise tax revenues is from transportation of passengers. Taxes from transportation of passengers include the domestic passenger ticket tax, domestic flight segment fees, and taxes on mileage awards (frequent flyer tax). The next largest tax revenue source is the Use of International Air Facilities, i.e., the international arrival and departure fees.

#### AIP key - no good alt to AIP funding

**USGAC 96-** us general accounting office (“letter from USGAC to Chairman of the US Committee on Appropriations Mark O Hatfield”, July 31, 1996, http://gao.justia.com/department-of-transportation/1996/7/aip-funding-for-the-nation-s-largest-airports-rced-96-219r/RCED-96-219R-full-report.pdf)//MSO

If AIP funding declines further, airports’ and airlines’ costs may increase, while the effect on passenger costs are uncertain- With less AIP, an-ports’ options include reducing capital investments, increasing other sources of funding, or adopting a combination of the two. According to FAA officials, AIP reductions would most likely affect projects related to airfields’ pavement, such as runway and taxiway construction, because that is where most AIP spending occurs. If airports maintained the same levels of capital investment with less AIP funding, airport costs could increase-for example, from increased interest expense on additional airport bonds. Increased airport capital costs could mean reduced profitability for airlines or increased ticket prices for passengers. However, airlines are cautious in passing on cost increases to passengers because even a slight increase in ticket prices can result in a decline in passengers.

#### AIP key - alternative funding sources unreliable

**USGAC 96-** us general accounting office (“letter from USGAC to Chairman of the US Committee on Appropriations Mark O Hatfield”, July 31, 1996, http://gao.justia.com/department-of-transportation/1996/7/aip-funding-for-the-nation-s-largest-airports-rced-96-219r/RCED-96-219R-full-report.pdf)//MSO

Airports have three other major sources of capital funds besides AIP: passenger facility charges, bonds, and airport revenue. Large and medium hub airports, as a whole, could potentially increase these other sources of capital to substitute for AIP reductions. However, these funding sources are constrained for various reasons, such as statutory limits on passenger facility charge collections and federal policy on airport revenue. If the current maximum $3 per passenger fee remained unchanged, we estimate that passenger facility charges could grow at least $190 million beyond their current levels by 2010. Airports’ capacity to pay for additional bond financing by passing on debt service costs to airlines or recovering them from nonairline sources such as concessions could vary substantially. Large hub airports were able to pass on debt service costs while significantly increasing bond issues between 1988 and 1994. Increasing capital funding from airport revenues such as airlines’ landing fees and concession receipts is tenuous because of its variability and airline and federal limits on airport revenue.

# NextGen Add-On

#### AIP infrastructure funding key to NextGen

**NASAO 12** (NASAO is one of the most senior aviation organizations in the United States, National Association of State Aviation Officials**,** NASAO NATIONAL LEGISLATIVE AGENDA, 2012, http://www.nasao.org/Advocacy/NASAOAgenda.aspx ) //LP

**NASAO fully recognizes the importance of national deficit reduction, but notes that the Airport Improvement Program (AIP)** and its associated Aviation Trust Fund have always been the recipients of a series of dedicated federal excise taxes, paid by aviation users. AIP and its trust fund **should not be viewed as a potential source of deficit reduction funds. To do so will inevitably lead to** a decrease in safety, **an unacceptable reduction in the current pace of NextGen implementation**, and a decrease in efficiency resulting in increased airline delays. NASAO firmly believes that **our national aviation infrastructure has always been and should always be a federal responsibility**. While the states are ready and willing to assist, as they always have, the leadership of financing our national aviation system rightly rests with the Administration, Congress, the U.S. Department of Transportation and the Federal Aviation Administration (FAA).

#### NextGen is key to the economy and efforts to curb emissions SpaceRef, 2008 (“Next Gen Economic Stimulus for Industry and Nation”, October 30, http://www.spaceref.com/news/viewpr.html?pid=26851) Megan

Arlington, Va. - **In today's economic downturn the civil aviation industry needs confidence that the government's commitment to implement the Next Generation Air Transportation System is real** and on a predictable schedule said AIA's Vice President of Civil Aviation Dan Elwell in testimony submitted to the House Committee on Transportation and Infrastructure Wednesday. "**Funding NextGen is a great two for one option at a time when Congress is seeking opportunities to promote economic recovery and policies to protect our planet from global warming**, " said Elwell. According to Elwell, implementation of **NextGen will dramatically improve air traffic efficiency. A more efficient system helps the environment by burning less fuel and producing less carbon dioxide**. He recommended that economic stimulus funding for the FAA's Airport Improvement Program include not only ongoing projects, but also NextGen investments. Other **initiatives like accelerated depreciation for aircraft purchases and environmental tax credits or low interest loans for the purchase of fuel-saving NextGen equipment will help keep the aerospace workforce fully employed. "The aerospace industry is a vital economic engine**," Elwell said. "**The industry provides thousands of high paying jobs and a $60 billion trade balance that bolsters the entire U.S. economy.**" NextGen is an advanced, satellite-based system that will employ cutting edge technology to transform air travel in the United States. It will replace the current air traffic control system, which is based on outdated architecture, with some technology pioneered as long ago as World War II.

### NextGen Extensions

#### Plan creates the confidence that the industry needs to implement NextGen which results in an economic stimulus and a greening of airports

**Elwell, 2008** (Dan, vice president of Civil Aviation Aerospace Industries Association, “Investing in Infrastructure: The Road to Recovery”, Oct. 29, http://www.aia-aerospace.org/aianews/speeches/2008/testimony\_house-transportation-infrastructure-comm\_102908.pdf) Megan

In today’s economic environment, that kind of investment may strike some as expensive, but pails in comparison to the recently passed $700 billion Economic Stabilization Act. As you know, **NextGen is absolutely necessary if commercial aviation is to achieve sustainable growth. By even the most modest estimates**, the direct and indirect economic benefits of commercial **aviation accounts for about five percent of U.S. GDP**. The civil aerospace industry **employs more than ten million people. To sustain this vital industry and allow it to grow in an environmentally sound way, NextGen** air traffic management **infrastructure must be built;** private aircraft owners must purchase new equipment; and airlines must replace older, fuel-guzzling aircraft with new, quieter, fuel-efficient, NextGen-ready models. To remove the risk inherent in large expenditures, **the industry needs the economic confidence that NextGen has the fiscal commitment of the U.S. Government.** This can be achieved in several ways: 31. **Economic stimulus package funding increases for the Airport Improvement Program should include flexible eligibility for NextGen investments** both on and off airside property. **Funds** to build taxiways and runways **will create jobs** in local districts and provide more room for aircraft, but **without new NextGen approaches**, new ground tracking systems, and ADS-B devices, **growth** at our airports **will be restricted**. Integrating security for passengers and baggage into the travel experience must be a priority so that the passenger is not as inconvenienced as they are today, while achieving the same security objectives. 2. One year extension of existing legislation granting accelerated depreciation for the purchase of new, environmentally friendly aircraft and the addition of new language to provide the same benefit for the purchase of commercial aircraft. 3. **Any initiatives by congress to reduce risk** and incentivize initial purchase decisions for new aircraft and aircraft equipment w**ill help keep jobs, create new employment opportunities and improve fuel efficiency. Improved fuel efficiency translates to a smaller environmental footprint through reduced CO2 emissions**. All future growth in the civil aviation sector must be environmentally sustainable. Purchasers of environmentally friendly aircraft and NextGen avionics equipment could receive environmental tax credits – much like the tax credits given by some states to motorists who purchase hybrid automobiles. The State of Alaska has instituted a low- interest loan program for the purchase of certain NextGen-related aircraft avionics purchases. Similar initiatives at the federal level could incentivize a faster transition to NextGen. AIA and its members do not support handouts or bailouts. **The only economic stimulus civil aviation needs in today’s economic crisis is growth made possible by the efficiencies of NextGen, and confidence in the industry that the commitment to implement NextGen is real** and on a predictable schedule.

#### Uncertainty of federal funding is preventing implementation of NextGen

Bogdan, 2012– Staff Writer for the Press of Atlantic City(Jennifer, “Uncertainty about benefits, funds hurting Next Generation Air Transportation System, think tank study says”, Press of Atlantic City, April 15, 2012, http://www.pressofatlanticcity.com/communities/eht/uncertainty-about-benefits-funds-hurting-next-generation-air-transportation-system/article\_606a1c4a-86a1-11e1-9a37-001a4bcf887a.html) //GKoo

Airline carriers are reluctant to take on the costs associated with upgrading planes to accommodate the Next Generation Air Transportation System because there is no clear funding stream for the project and there is disagreement about its benefits, according to a study by a Washington, D.C., think tank. The study by the Eno Center for Transportation, a nonpartisan group that leads professional development in the transportation industry, found four key barriers to implementing the federal program known as NextGen: n Uncertainty about the program’s benefits; n Uncertainty about the Federal Aviation Administration’s ability to deliver the program; n Lack of a clear source of funds for NextGen; n And operators’ reluctance to invest in NextGen equipment. NextGen refers to a series of initiatives that will modernize the air traffic control system, transforming it from a radar-based system to a more-efficient satellite-based program. The cost of the upgrades is projected at about $40 billion — with half shouldered by the federal government and half by the airlines — and they are not expected to be complete before 2025. Much is riding on the federal program for South Jersey. NextGen concepts must be tested at the FAA’s William J. Hughes Technical Center in Egg Harbor Township, which employs 1,500 FAA workers and 1,500 contractors. Plans have existed since 2005 to develop a NextGen Aviation Research and Technology Park on the tech center’s grounds in the hope that major aviation companies would take up residence there. Progress on the park, however, has been slowed by gaffes made by the South Jersey Economic Development District, which leases the park’s land from the FAA. Slow progress also is attributed to problems with federal funding for the initiative. The FAA has released only $442 million of $7 billion in NextGen funding, and when the rest will come is unknown. “Operators are unlikely to invest until, at a minimum, the (FAA) is ready to deliver the promised benefits. This leads to a stalemate: Operators are uncertain whether investing in NextGen is worthwhile. When the infrastructure is not yet fully in place and without equipage, the infrastructure by itself is ineffective,” the report reads. Joshua Schank, president and CEO of the Eno Center, said he couldn’t speak specifically about the prospects of the Egg Harbor Township park. However, he said, given his firm’s research, he would move cautiously if involved in the project. “To be frank, basing any development of any kind on federal money is pretty risky,” Schank said. “Things like transportation are often the first things to be cut in a federal budget because people take them for granted. If you say, ‘We’re going to cut funding for NextGen,’ what constituency is going to step up and fight that? The aviation industry? Maybe. But probably no one.”

#### Federal leadership is key to spur private action – without new infrastructure NextGen will not go through

Bogdan, 2012 – Staff Writer for the Press of Atlantic City(Jennifer, “Uncertainty about benefits, funds hurting Next Generation Air Transportation System, think tank study says”, Press of Atlantic City, April 15, 2012, http://www.pressofatlanticcity.com/communities/eht/uncertainty-about-benefits-funds-hurting-next-generation-air-transportation-system/article\_606a1c4a-86a1-11e1-9a37-001a4bcf887a.html) //GKoo  
One of the major obstacles to implementing NextGen is that as the program stands now, airline operators are expected to shoulder the cost of equipping their aircrafts with the technology. Those costs are estimated to amount to $100,000 per jet aircraft and $10,000 per small aircraft, affecting as many as 240,000 planes. Airlines are reluctant to invest in the technology because it provides no benefit to them unless the FAA puts infrastructure in place that makes it useable, the report states. “If I go first, I’ll have to bear the cost of updating the software, and when NextGen is turned on, I’ll have the oldest, most obsolete systems out there,” is the general concern from operators, said Russell Chew, of Nexa Capital, a private financing firm for NextGen equipment. Schank said the Eno Center embarked on its research in part because of concerns relayed through connections in aviation’s private sector. “The more we talked to them about NextGen, the more this would come up. They’d say, ‘We don’t want to be out there investing tons of money in this technology when we don’t know what the technology is going to be at the end of the day,’” Schank said. Some of those doubts are the result of a lack of a dedicated funding stream for the program. Recent reports by the Government Accountability Office and the Congressional Budget Office show that revenues from the FAA’s Airport and Airway Trust Fund, which is expected to finance the upgrades, are inadequate to fund NextGen. Earlier this year, Congress came to a resolution over an FAA reauthorization bill that will fund the authority into 2015. Long-term authority for the FAA previously expired in 2007, leaving the agency to depend on a series of 23 short-term financing extensions and leading to a partial shutdown of the FAA that put 650 William J. Hughes Technical Center employees temporarily out of work last summer. “Despite recent resolution over the long overdue FAA reauthorization bill, little progress has been (made) regarding securing a full-fledged modernization funding plan. The current bill authorizes a flat amount of $2.731 billion over four years for NextGen, and funding is still subject to annual appropriation,” the report states. “A project that is already endangered by uncertainties regarding its worth would benefit from a stable and adequate funding source.” US. Rep. Frank LoBiondo, R-2nd, championed the long-term reauthorization bill in February, saying it would bring stability to the FAA and ensure that substantial work on NextGen will be completed. Jason Galanes, a spokesman for LoBiondo, said the congressman stands by those statements and believes a reliable funding stream is critical to advancing the program. “He believes the passage of the FAA authorization and the bipartisan commitment to NextGen should give the airlines reassurance about the future of the project and encourage their active participation and investment,” Galanes said. “Locally, as NextGen development continues, business and aviation industry leaders who are or will be involved are right to realize that our FAA Technical Center in South Jersey will be the hub of that research, development and implementation.” Schank, of the Eno Center, said even if money is available, that alone will not crush the obstacles. “The problem is there has not been the leadership necessary to bring the private sector along effectively and to move forward with the technology from the FAA’s perspective,” he said. “You need someone who will say, ‘Here’s the promises we’re going to make to the private sector. This is how we’re going to meet the deadlines and performance objectives.’ The private sector does not want to invest when it’s not clear who’s in charge or how it’s going to get done.”

#### NextGen programs solve for environmental harms

Huerta, 2011 – Acting Administrator of the Federal Aviation Administration (Michael, “Testimony – Statement of Michael Huerta “, Federal Aviation Administration, October 5, 2011, http://www.faa.gov/news/testimony/news\_story.cfm?newsId=13134 //)GKoo

As with safety, our work to enhance aviation’s influence on the environment also benefits – and is a beneficiary of – NextGen. The operational improvements that reduce noise, carbon dioxide and other greenhouse-gas emissions from aircraft are the tip of the FAA’s environmental iceberg. Equally important are the other four-fifths of the agency’s environmental approach – aircraft and engine technology advances, sustainable fuels, policy initiatives and advances in science and modeling. Environmental benefits of operational improvements are simple and direct. When we improve efficiency in the NAS, most of the time we save time and fuel. Burning less fuel produces less carbon dioxide and other harmful emissions. Some of our NextGen improvements, notably landing approaches in which aircraft spend less time maintaining level flight and thus can operate with engines at idle, reduce ground noise too. But operational benefits go only so far; their net system-wide effect can be offset by growth of the aviation system.

#### NextGen greatly reduces greenhouse gas emissions – current system is outdated and terrible

NASA, 2012 – National Aeronautics and Space Administration (“ Air Traffic Management (ATM) Technology Demonstration - 1 (ATD-1): Interval Management - Terminal Area Precision Scheduling and Spacing (IM-TAPSS) “, Aviation Systems Division, March 8, 2012, http://www.aviationsystemsdivision.arc.nasa.gov/research/tactical/atd1.shtml //)GKoo

At any given moment, up to 5,000 aircraft crowd U.S. skies. In 2010, the National Airspace System (NAS) managed the progress of nearly 10 million flights. Such high air traffic demand, operating with procedures that were largely in place from the earliest days of commercial aviation, does not always result in the most efficient or coordinated operations. As a result, the air transportation system often experiences significant delays and lost productivity, and produces greater amounts of noise pollution, carbon dioxide, and other greenhouse gas emissions than if operations were more efficient. As air traffic demand is projected to double in the next 20 years, our current air traffic control system will be further strained and the environment adversely affected. Improving the efficiency of the terminal area, which is the volume of airspace surrounding airports to a radius of about 50 miles, is an especially complex task due to operating characteristics that are quite distinct from the en route environment. Terminal area controllers manage both ascending and descending aircraft, more frequent turns, a wider range of separation standards, as well as terrain and increased traffic density within shorter time horizons. In today’s terminal area arrival operations, as an aircraft transitions for landing, controllers track and guide the aircraft from cruise altitude to the runway using simple visual aids as well as their skills and judgment. They issue turn-by-turn instructions (a process known as vectoring) via radio communications. As aircraft approach the runways, controllers manually merge aircraft and sequence them for arrival. Busy terminal area conditions often force the aircraft to fly inefficient arrival paths involving frequent changes in direction, altitude, and speed to maintain safe separation from other aircraft. Frequently, controllers must employ longer routes (known as path stretching) or holding patterns to tactically accommodate larger amounts of delay. The tactical nature of this manual approach leads to increased fuel burn and noise pollution, contributes to high controller workload, and exacerbates traffic congestion. Moreover, the imprecision of this current system creates greater uncertainty, and forces controllers to add buffers to the separation required between aircraft, which decreases airspace capacity, leading to further delays. While more efficient arrival paths are achievable today, current technology limits their feasibility to only during light traffic conditions, such as during the middle of the night. During periods of high-density traffic, maintaining safe separation and throughput take precedence over achieving efficient operations. The technical challenge facing the aviation community is to make efficient arrival procedures common practice during heavy traffic when they are needed most, while still ensuring safety and throughput. NASA is collaborating with the FAA and other industry partners to develop several advanced automation tools that provide air traffic controllers, pilots, and other airspace users with more accurate real-time information about the nation’s traffic flow, weather, and routing. The greater precision of this information is a key enabler of the Next Generation Air Transportation System (referred to as NextGen).NextGen is a comprehensive transformation of the NAS, which will be safer, more reliable and more efficient, and will reduce the impact of aviation on the environment. The transition to NextGen is vital to improving system performance, meeting continued growth in air traffic, and increasing the Nation’s mobility to support economic progress. ATM Technology Demonstration-1 (ATD-1) will showcase an integrated set of NextGen technologies that provide an efficient arrival solution for managing aircraft beginning from just prior to top-of-descent and continuing down to the runway. These technologies are: Automatic Dependent Surveillance – Broadcast (ADS-B) Area Navigation (RNAV) Arrival Routes Optimized Profile Descent (OPD) Procedures Terminal Metering Flight Deck Interval Management (FIM) Controller Managed Spacing (CMS) tools These ATM technologies have thus far been tested separately and each has demonstrated throughput, delay, and/or fuel-efficiency benefits. Together, the technologies will demonstrate the feasibility of high throughput of efficient arrival operations during peak traffic conditions in the terminal area. Simply put, the integration of these terminal arrival tools will allow arrival aircraft to safely fly closer together on more fuel-efficient routes to increase capacity, reduce delay, and minimize fuel burn, noise, and greenhouse gas emissions. Using the ATD-1 technologies, both pilots and controllers will have more accurate and timely information and advisories, thus reducing the need for extensive coordination and negotiation between them to achieve more efficient operations. Terminal Metering (based on precision scheduling enhancements to the Traffic Management Advisor [TMA]) will determine an arrival schedule based on airport conditions, airport capacity, required spacing, and weather conditions and utilize new, more direct RNAV routes that extend from en route airspace and continue through terminal airspace to the runway. The schedule, determined well in advance of when it is executed, will be communicated to both controllers and flight crews. Flight crews will know their intended flight path, which aircraft they ought to be following, and the desired spacing interval at certain points along their designated RNAV route to reach the destination airport safely and on schedule. Controllers will no longer have to make tactical, last second decisions concerning merges and arrival slots, and will not likely need to provide as many interventions as they do in today’s busy traffic conditions.

# MAP Cards

#### The AIP discretionary fund funds the Military Airport Program

Kirk 09 – Specialist in Transportation Policy (Robert S., “Airport Improvement Program (AIP): Reauthorization Issues for Congress”, May 29, 2009, Congressional Research Service, http://www.fas.org/sgp/crs/misc/R40608.pdf)//IIN

Discretionary Funding The discretionary fund (49 U.S.C. sec. 47115-47117) includes the money not distributed under the apportioned entitlements, as well as the foregone PFC revenues that were not deposited into the Small Airport Fund. In recent years, AIP discretionary funds have ranged from roughly 24%- 30% of the total annual AIP funding distribution.47 Discretionary grants are approved by the FAA based on project priority and other selection criteria, including congressional directives in appropriations legislation. Despite its name, the discretionary fund is subject to three set-asides and certain other spending criteria. The three set-asides are: Airport Noise Set-Aside. At least 35% of discretionary grants are set-aside for noise compatibility planning and for carrying out noise abatement and compatibility programs. Military Airport Program (MAP). At least 4% of discretionary funds are set-aside for conversion and dual use of current and former military airports. Fifteen airports may participate. The MAP provides financial assistance for capacity and /or military-to-civilian use conversion projects at former military or current joint-use airports. MAP allows funding of some projects not normally eligible under AIP.48 Grants for Reliever Airports. There is a discretionary set-aside of 2/3 of 1% for reliever airports in metropolitan areas suffering from flight delays. The Secretary of Transportation is also directed to see that 75% of the grants made from the discretionary fund are used to preserve and enhance capacity, safety and security at primary and reliever airports, and also to carry out airport noise compatibility planning and programs at these airports. From the remaining 25%, the FAA is required to set aside $5 million for the testing and evaluation of innovative aviation security systems.

#### AIP funds the Military Airport Program

Surgeoner 99 - LCDR, USN (Robert F., “THE MILITARY AIRPORT PROGRAM: AIR POWER FOR CIVIL AVIATION”, April 1999, AIR COMMAND AND STAFF COLLEGE AIR UNIVERSITY, <http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA398896>) IIN

Though many people may think of military and civil aviation as separate entities, air power in its most general sense combines all elements of both. The United States government considers airlines to be much like public utilities, offering services that are said to be in the public interest for the need of the United States citizen.1 The public interest in civil aviation spans across three main areas. The first, commerce, is the everyday business of the country, and includes both passenger transportation and air cargo transportation. Postal service, the second public interest, provided much of the rich history of the development of civil aviation, and is still instrumental in it today. In fact, 90% of all intercity first-class letters are carried by the airlines.2 The third aspect of public interest served by the civil air industry is national defense, which also encompasses international affairs.3 It is the aspect of national defense that binds military and civilian air power. United States’ history is full of examples where the two have come together as one, serving both the purposes of the military and civilian communities. Military pilots were once used to deliver mail for the United States Postal Service. Many joint-use airports are in operation throughout the country today. Aircraft manufacturers design products for civilian and military applications, and technologies developed in both the civilian and military sectors are exchanged between the two to benefit both. As such, it should come as no surprise then that there have also been many legislative acts throughout the United States’ history that have affected both military and civilian air power. In 1940, the Development of Landing Areas for National Defense (DLAND) Act was the legal impetus for construction of small airports around the country. Many of these are still in operation today, mostly in the general aviation community, and are easily recognizable by their triangular shapes consisting of three 5,000-foot long runways.4 A major piece of air power legislation was passed in 1958. Entitled the Federal Aviation Act, it made the Secretary of Transportation responsible for developing and operating an air traffic control system for both civil and military aircraft, and further stated that he/she must consider the needs of national defense in exercising his/her authority over U. S. navigable airspace.5 Two organizations were affected as a result of Executive Order No. 11090 signed by President John F. Kennedy on February 26, 1963. The order redefined emergency preparedness functions and created the War Air Service Program (WASP). In turn, the WASP directly affected the Civil Reserve Air Fleet (CRAF). The War Air Service Program was “designed to provide for the maintenance of essential civil air routes and services, and to provide for the distribution and redistribution of aircraft among civil air transport carriers after the withdrawal of aircraft allocated to the Civil Reserve Air Fleet.”6 In conjunction with the War Air Service Program, the Civil Reserve Air Fleet identified “air carrier aircraft allocated by the Secretary of Transportation to the Department of Defense to meet essential military needs in the event of an emergency.”7 Much has been written, discussed and debated about the Civil Reserve Air Fleet. In short, Civil Reserve Air Fleet carriers get preferential treatment when applying for non- defense government business, and peacetime contracts for carrying cargo and passengers. The amount of business they receive is directly proportional to the number of aircraft they make available to the CRAF. Currently, there are over 500 such aircraft in the program. Though initially established by President Harry S. Truman in 1951 in response to the Korean War, it was never actually activated until August 1990 after the Iraqi invasion of Kuwait.8 The Department of Transportation Act of 1966 further solidified the ties that bind U.S. military and civilian air power. It directed the United States Coast Guard to maintain interoperability with the Department of Defense to include military activities that support national security, and further defined the mission of the Federal Aviation Administration to support the Department of Defense in wartime. Executive Order 11161 further stated that the Federal Aviation Administration will be transferred to the Department of Defense in the event of war, and will function as an adjunct of it.9 Lastly, the Airport Improvement Program was developed to provide federal capital assistance to ensure airport capacity meets military, commercial, and safety needs. It is the nation’s major program for planning and improving its airport infrastructure. A multi-billion dollar program administered by the Federal Aviation Administration, it includes legislatively established funding categories, called set-asides, for specific uses.10 The author will examine one such set-aside, the Military Airport Program.

#### MAP cost-effective and k2 improving air transportation

Surgeoner 99 - LCDR, USN (Robert F., “THE MILITARY AIRPORT PROGRAM: AIR POWER FOR CIVIL AVIATION”, April 1999, AIR COMMAND AND STAFF COLLEGE AIR UNIVERSITY, <http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA398896>) IIN

Fundamentals of the Military Airport Program The Airport and Airways Improvement Act of 1982 established the Airport Improvement Program grant. Under it, the Federal Aviation Administration provides funding for airport planning and development projects that enhance capacity, safety, security, and noise mitigation. The FAA has designated about 3,300 airports as critical to the national airport system and thus eligible for Airport Improvement Program funds. The funds are distributed on the basis of a legislated entitlement formula through one of five set-aside categories earmarked for specific types of airports or projects. The five set- asides are Military Airports, Planning, Small Commercial Airports, Relievers, and Noise.1 The Military Airport Program set-aside of the Airport Improvement Program grant was established in Fiscal Year 1991. The original legislation required the Secretary of Transportation to select up to eight current or former military airports to receive not less than 1.5 percent of the total Airport Improvement Program funding from the set- aside in fiscal years 1991 and 1992, a total of $29.3 million and $29.5 million, respectively.2 The criteria for receiving such grants include the stipulations that the airport must meet to be eligible for the program. Specifically, it must be a former or current military airport, it must have the potential for conversion to either a public-use commercial service or reliever airport, and its conversion must enhance airport and air traffic control system capacity in major metropolitan areas and reduce current and projected flight delays. The Secretary of Transportation delegated the identification and recommendation of qualified airports to the Federal Aviation Administration.3 The FAA eventually published criteria to clarify eligibility for the Military Airport Program. It said selected airports must be located in or near a major metropolitan area presently experiencing or projected to experience high levels of annual air carrier delay (exceeding 20,000 annual hours) at the existing air carrier airport. Airports could also be eligible if, in the opinion of the Secretary, they were in or near a location where its development would result in an increase in overall airport system capacity.4 The designated airports are then eligible to participate in the program for five fiscal years following their designation.5 As of the end of FY 1995, 17 major military airfields had been converted to civil use. All were airfields identified in the 1988, 1991, and 1993 Defense Base Closure and Realignment Commission reports.6 By granting funds for the conversion of such airports, the former bases can contribute significantly to the national air transportation system. They enhance airport and air traffic control system capacity in their respective metropolitan areas, as well as reduce current and projected flight delays. The alternative course of action, building new airports and their associated facilities, would quickly deplete all the funds in the Airport Improvement Program. The Military Airport Program costs only a fraction of the amount, yet provides the increased infrastructure upon which to build. The costs then, are mainly to convert the military airfield for civilian use. These primarily include the construction of terminal buildings that are not normally a part of military airfields, but may also include land acquisition; security improvements; runway, apron, and taxiway construction and improvements; and lighting improvements. When combined, these costs to the local communities acquiring the excess facilities can quickly become a financial burden.7 Federal aid, in the former of Military Airport Program grants, is the apparatus designed to shoulder that burden.

# AT: States CP/Fed Key

#### Federal investment is a prerequisite to state spending – states won’t invest long-term if federal funding is diminishing

**COHEN ‘2** – Associate Professor of Economics; Ph.D., University of Maryland, College Park, December 1998 (Jeffrey, “Reciprocal State and Local Airport Spending Spillovers and Symmetric Responses to Cuts and Increases in Federal Airport Grants”, January 2002, SAGE)//Bwang

Recently, the U.S. Congress has debated whether to reauthorize funding for the Federal Aviation Administration’s (FAA’s) intergovernmental grants program, the Airport Improvement Program (AIP). This debate has been revived on more than one occasion over the past several years, bringing to the forefront the importance of examining the state and local airport spending responses to changes in AIP grants. Furthermore, the value of AIP cash outlays awarded in individual states has varied over the course of the AIP. Although in some years total AIP cash outlays to some states have risen, total AIP cash outlays to other states have fallen at the same time. Similarly, for many states, there is individual variability over time in total AIP cash outlays awarded in the sense that in some years, total AIP cash outlays to a given state rise, whereas in other years, total AIP cash outlays fall. This variability is demonstrated for a selection of states in Table 1. The variability in the AIP grants also leads to the question of whether states and localities exhibit symmetric spending responses to both increases and decreases in these grants. There is an extensive literature on the effects of changes in intergovernmental grants on spending responses of state and local governments receiving federal aid. The public finance literature has shown that in general, an increase in lump-sum intergovernmental grants to a state or locality should lead to an expenditure response by the recipient government equivalent to that from a lump-sum increase in income of the median voter (Bradford and Oates 1971).The theory similarly predicts a symmetric response in state and local spending for a decrease in intergovernmental grants. For the most part, the empirical evidence has not supported this theory. Many studies (discussed by Gramlich 1977) have found that increases in various types of intergovernmental grants to states and localities have led to spending increases somewhat greater than the marginal propensity to spend out of an increase in private income. This phenomenon has been described as the flypaper effect because these empirical results have implied that the grant money “sticks where it hits.” There have been many attempts to explain such empirical findings, including criticisms of econometric specifications and allegations of the presence of price effects arising due to the matching rates present in some grants programs. How states and localities respond to general forms of diminished federal aid has become a question of increasing interest (see Quigley and Rubinfeld 1996 for a discussion of this issue). A more recent empirical literature has examined the spending responses of states and localities to cuts in intergovernmental grants. Overall, the empirical evidence is mixed as to whether states and localities exhibit symmetric expenditure responses to both cuts and increases in grants. Furthermore, when asymmetric spending responses are found, there is the ad- ditional question of whether states and localities pick up the slack and spend more in response to cuts in intergovernmental grants (fiscal replacement) or spend less in response to cuts in intergovernmental grant receipts (fiscal restraint). Stine (1994) studied 66 Pennsylvania county governments and found that own-source revenue fell in response to a cut in aid from the federal government. But county spending rose in response to decreases in grants from state governments. Gamkhar and Oates (1996) used aggregate time series data for state and local expenditures and found symmetric state expenditure response to cuts and increases in grants. Volden (1999) studied the asymmetry question by analyzing specific data on state welfare expenditures. He found that when the state matching level rose (implying a cut in welfare grants to the states), states did not change their welfare payments. But when the matching level fell, states increased their welfare payments. Gamkhar (2000) examined asymmetries related to federal highway grants. She found that cuts in grants resulted in an asymmetric highway spending response by state and local governments in the period the cut occurred. States and localities spent less on highways at the time of the cut, whereas the contemporaneous effect on highway spending of an increase in grants was insignificant. But she did find a symmetric highway spending response to changes in lagged highway obligations. It is postulated here that AIP grants from the federal government are an important determinant of state and local airport spending. It is also reasonable to postulate that airport spending in a particular state depends not only on its own economic variables (such as grants from the federal government and disposable income) but on the level of airport spending in other states. The theory elaborating on the possibility of individuals’ receiving benefits from public spending in other states can be traced back to Oates (1972). In the present case, this seems plausible due to the “hub and spoke” (Morrison and Winston 1985) structure of the U.S. air transportation system. Namely, cross-country passengers may fly from a spoke in a state in one end of the country to a central hub in another state, change planes, and fly on to a state in the other end of the country. Often, passengers wait in an airport in a particular state for a plane that has been delayed on its previous leg due to congestion at an airport in another state. A delay resulting from congestion at one node in the air transportation system often results in further delays for connecting passengers throughout the entire system. Thus, spending increases at airports that are proverbially riddled with time delays confer spillover benefits on individuals in other states who travel through the airport in question. These benefits are in the form of travel time savings. This could make it socially optimal for an individual state to increase its airport spending when other states spend more on airports. Moreover, these benefits are reciprocal in nature as described by Oates (1972). It will be important to incorporate this potential interdependency into an empirical framework that examines asymmetric state and local airport expenditure responses to changes in AIP grants.

#### Federal funding key – states fail, oversight

Bennett 99 (Grant D., “Funding Airport Infrastructure: Federal Options for Solvency”, Journal of Engineering and Public Policy, August 5th, 1999, http://www.wise-intern.org/journal/1999/index.html)//IIN

The FAA, through the Airport Improvement Program (AIP), addresses infrastructure needs. The AIP was established to promote and enhance safety, security, capacity, noise mitigation and environmental concerns, and to promote the use of existing infrastructure(i.e., using former military airports for civilian use).22 In general, the AIP receives money from the Aviation Trust Fund to address infrastructure and development needs and concerns at airports. Although the AIP is tasked to support airport infrastructure, the demand for further funding is not met by these federal dollars and the burden is falling on state and regional authorities. The overall capital development by airports in 1998 is shown in the chart below.23 Funding Sources for Capital Development Airport Revenue 2% Tax Exempt Bonds 58% Regional Gov't 4% Passenger Facility Charges 16% AIP Grants 20% The tax-exempt bonds are issued at the regional level, leaving AIP grants as the sole source for federal funding. Even for AIP projects, the nonfederal share of funding is 10% for smaller airports and 25% for large and medium hub airports.24 Passenger Facility Charges Although the federal government does not fund a majority of infrastructure, the AIP grants and Passenger Facility Charges **(PFC’s)** combined cover over one-third of the development money, and could be increased to cover a larger share. **PFC’s began in 1992 by** allowing airports to collect up to $3 per boarding passenger for preserving or enhancing airports’ safety, security, or capacity; reducing noise; or enhancing airline competition.25 This allows for use of PFC’s in development areas similar to AIP use, except with respect to airline competition. PFC’s play a crucial role in addressing competition between airlines since regulations require development projects using these funds to enhance competition among airline carriers. Congress sets limits on the amounts of these charges, so current legislation to reauthorize the FAA looks to alter PFC levels. Current Legislation on Capitol Hill Realizing that airports need more funding for infrastructure, some members of Congress are asking why there is a surplus of money in the Aviation Trust Fund that could go to AIP grants. For 1999, the unexpended balance of the Aviation Trust Fund will be $3.41 billion. This money, along with unexpended balances from years past, will create a beginning balance in the Aviation Trust Fund of $12.3 billion for fiscal year 2000.26 Addressing this concern, Rep. Bud Shuster (R-PA), Chairman of the House Committee on Transportation and Infrastructure, pushed H.R.1000 through the House on June 15th, 1999, by a vote of 316-110.27 H.R.1000, the Aviation and Investment Reform Act for the 21st Century (AIR21), proposes AIP spending of $2.475 billion for FY2000, $4 billion for FY2001, $4.1 billion for FY2002, $4.25 billion for FY2003, and $4.35 billion for FY2004. Also included in H.R.1000 are proposals to change PFC caps to $4, $5, or $6. The proposed AIP funding levels in H.R.1000 are dramatically increased over current levels because of an AIR21 measure moving the Aviation Trust Fund off budget. Off budget treatment removes the Trust Fund from the Budget Enforcement Act, guaranteeing that all the dollars collected by the Aviation Trust Fund go to FAA programs. 28 The Senate bill reauthorizing the FAA does not move the Trust Fund off budget. The Air Transportation Improvement Act, S.82, sponsored by Chairman John McCain (R-AZ) of the Senate Committee on Commerce, Science and Transportation, proposes AIP spending of $2.41 billion for FY1999 and $2.475 billion for FY2000.29 A conference committee will create the final bill to be passed by both houses of Congress and then to be signed or vetoed by the President. The bills from both the House of Representatives and the Senate increase funding for the AIP, but opposition within Congress and by the President is a problem. Congressional Opposition to Increased Funding Levels A key distinction to recognize is that the previously mentioned bills are authorizations. This legislation allows the money to be spent, but a second obstacle facing airport infrastructure and the FAA is the appropriations process in Congress. Appropriators actually give the money to specific programs, and the funding levels authorized are not necessarily the same as the money appropriated. Many members in Congress **from Budget and Appropriations committees** want to have oversight of the AIP funding, but they never mention the needs of airport infrastructure in their analysis. The Senate Budget Committee, chaired by Senator Pete Domenici (R-NM), says strong oversight is needed from both authorization and appropriation committees to prevent inappropriate spending.30 Further analysis by the committee states that firewalls around aviation funding will not be sufficient alternatives for moving the Aviation Trust Fund off budget. Firewalls in legislation would allow for earmarking by Congress to specific AIP projects, but force the authorized funding levels to be spent on aviation. The main theme appearing is one of control and oversight of spending by the congressional committees. Reasons for wanting these controls do not focus on infrastructure needs, but instead focus on political concerns. Rep. C. W. Bill Young (R-FL), chairman of the House Appropriations Committee, worries that the increased spending from AIR21 will break the current budget caps and postpone income tax cuts for the general public. His main concerns revolve around maintaining fiscal discipline, tax cuts, and protecting social security.31 Although Chairman Young warns of effects from moving the Aviation Trust Fund off budget, the Appropriations Committee recommended that $2.25 billion be spent on the AIP for FY2000, which is $65 million higher than FY1999 levels.32 Presidential Politics in Infrastructure Spending The Clinton Administration, along with the FAA, has released a different proposal, S.545, to set AIP spending at $1.6 billion (current funding levels) for each fiscal year for FY2000 through FY2004.33 This proposal also raises the caps on PFC’s to $5 so as to increase nonfederal spending. The House Appropriations Committee is willing to spend more on AIP than the Clinton administration for FY2000. This is clearly a political conflict, as the FAA reports cited earlier state that increased funding is needed for airport infrastructure. The Executive Office of the President overlooks airport needs, like the appropriators, by saying that H.R.1000 would reduce the federal budget surplus so that there would be no long-term solvency to Social Security or Medicare.34 Politics are controlling the reauthorization of the FAA, and the previous actions by Congress and the President reflect that theme. Status Quo Funding Levels Currently, and in the past, Congress and the President have extended the same funding levels to the FAA for a few months at a time so differences in funding priorities could be worked out. **In** May, the 1999 Emergency Supplemental Appropriations Act included an extension of the AIP authorization that expires August 6th, 1999.35 As mentioned earlier, this funds the AIP at $1.6 billion annually. In all likelihood, the August deadline will cause a similar extension of previous funding levels if differences between the Senate and the House are not worked out soon. The effects from this kind of stop-and-go funding could lead to negative effects on airport infrastructure development and upkeep, but these effects fall outside of the scope of this paper. The Truth in Budgeting Alliance Whether the status quo is extended for a few more months or new legislation is enacted, changes in the methods of airport infrastructure funding need to be supported. Addressing this concern, the American Society of Civil Engineers supports having the trust fund moved off budget.36 ASCE has joined the Alliance for Truth in Transportation Budgeting, which supports legislation to move all transportation trust funds off budget. Members of the alliance include: Airports Council International, Airports Consultants Council, Air Transport Association, National Air Carrier Association, National Association of State Aviation Officials, American Road and Transportation Builders Association and the U.S. Chamber of Commerce.37 The alliance is advocating that all aviation dollars go to aviation projects, and stands as a strong force in the push for an off budget measure. The alliance supports the permanent extension of user fees to fund the specific areas they tax.

#### Can’t solve – federal government key to influential leadership positions

**AIA 08 –** U.S. Trade association representing the nation’s leading aerospace manufacturers (Aerospace Industries Association, “Election 2008 Issues,” http://www.aia-aerospace.org/assets/08issues\_9-environment.pdf)//JS

*\*ICAO = International Civil Aviation Organization*

**The U**nited **S**tates **provides 25 percent of ICAO’s budget, which enables U.S. specialists to fill a large number of ICAO technical leadership and staff positions. U.S. leadership in ICAO**, combined with the technical expertise of the Committee on Aviation Environmental Protection (CAEP), **provides a framework to ensure that U.S. aviation environmental issues are well represented in the global aviation community**. There is international consensus that environmental concerns could limit future aviation growth. While aviation is responsible for only two percent of global carbon dioxide emissions, aviation is a high-profile target during the ongoing global warming debates. This will intensify in the future, and aviation’s projected growth will be in jeopardy because without continued technological and operational advancements that percentage could increase significantly. ICAO, through CAEP, is the global agency charged with addressing international aviation environmental issues. The committee focuses extensively on the impact of aircraft noise and engine emissions and is examining the issues surrounding the development and use of alternative fuels. It has recently expanded its activities to include the impact of airport congestion and en route delays on emissions. Covering other areas of aviation, the ICAO Air Navigation Commission develops the organization’s standards and recommended practices that provide a framework for global and local aviation regulations and policies. Acting responsibly in concert with ICAO, international aviation has demonstrated a history of reducing… aviation’s environmental impact. For example, over the past 40 years, carbon dioxide emissions have been reduced by 70 percent. An international approach remains critical; and, because of ICAO’s leadership role, national, regional, and local solutions have not been successful. Aerospace Industries Association 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928 703.358.1000 Contrary to its aggressive aviation industrial policy, **the European Union imposes a myriad of operating restrictions, taxes, and charges on airlines and consumers to limit aviation growth**. Europe is also attempting to mandate charges in their emissions trading systems from non-European airlines, including those from the United States. **This is a detriment to the development of global solutions to environmental issues and can impair aviation and economic growth. The United States must remain vigilant to avoid worldwide imposition of these practices.**

#### Federal government key

**Shank 12** - President and CEO of Eno Center for Transportation (Joshua, “The Federal Role in Transportation: Four Ideas for Greater Federal Involvement”, May 31, 2012, http://www.enotrans.org/eno-brief/the-federal-role-in-transportation-four-ideas-for-greater-federal-involvement)//MSO

We often think of airports as local economic generators, and they are that, but some also have substantial national importance. The aviation network is dependent on large hub airports for the efficient and timely movement of passengers across the country and the world. A safe and reliable aviation network is essential for maintaining our competitiveness in the global economy. Unfortunately, we are in danger of losing our edge in this area because of congestion. Successful NextGen implementation could greatly alleviate the problem, but even if that happens airlines could take advantage of the new capacity and provide more frequent flights. Once economic growth picks up again we are likely to see airport congestion and delays increase as well. Airports such as Newark, San Francisco, and Chicago O’Hare already have approximately 30-40 percent of their flights delayed. Airports face substantial challenges in trying to tackle this issue on their own. The most widely recommended solution is pricing airport runways by time of day. But this politically unpopular solution has faced substantial opposition from communities such as smaller cities flying into hubs, or general aviation aircraft that are concerned about being effectively priced out of the market for a given airport. Congested airports would have a much greater chance of success if they were trying to tackle congestion in partnership with the federal government and other local transportation agencies. The federal role could be improved by dedicating a portion of the Airport Improvement Program (AIP) to provide grants to airports in regions that have a plan to work collaboratively to reduce congestion and overcome some of the political barriers to more effective pricing. Or the AIP could be retooled to set specific performance goals for airports and rewarding achievement. However it is done, there is a clear national interest at play here and the federal government needs to be more involved.

#### **State funding trades off with funding for roads**

Illinois DOT – (“Proposed Airport Improvement Program” Summer 2011, http://www.dot.il.gov/aero/2012program/2012program.pdf//AB)

Airport improvements are funded by federal, state and/or local funds. The federal funds are provided from the Airport Improvement Program, which is generated from taxes and user fees collected from the various segments of the aviation community. State funds are provided from Series B Aeronautics Bonds and Road Funds. Local funds come from a variety of sources. With the exception of Chicago O’Hare and Midway, federally eligible projects are funded with 95 percent federal, 2.5 percent state, and 2.5 percent local funds. At O’Hare and Midway, most projects are funded with 75 percent federal and 25 percent local funds.

#### **Roads key to the economy**

Burningham and Stankevich 05 – researcher for International Bank for Reconstruction and Development and World Bank, Washington DC (Sally and Natalya, “Why Road Maintenance is Important and How to Get it Done” June 2005 http://siteresources.worldbank.org/INTTRANSPORT/Resources/336291-1227561426235/5611053-1231943010251/tr-4\_final\_08-04-05.pdf//AB)

**Roads,** and means of transport, **make a crucial contribution to economic development and growth** and bring important social benefits. **Poorly maintained roads constrain mobility, significantly raise vehicle operating costs, increase accident rates and their associated human and property costs, and aggravate isolation, poverty, poor health, and illiteracy in rural communities**. **This** Note **highlights the economic and social importance of regular road maintenance** and recommends ways to achieve sustainable road maintenance with scarce public resources. Its audience is not specialists but rather people who need to understand road maintenance enough to discharge their responsibilities effectively: government policy-makers, mayors, ministry staff, new World Bank staff and staff in sectors such as rural development and social funds. The reference section offers sources providing more detailed information.

# AT: Federalism DA

#### Aviation infrastructure is a federal responsibility

**NASAO 12** (NASAO is one of the most senior aviation organizations in the United States, National Association of State Aviation Officials**,** NASAO NATIONAL LEGISLATIVE AGENDA, 2012, http://www.nasao.org/Advocacy/NASAOAgenda.aspx ) //LP

NASAO fully recognizes the importance of national deficit reduction, but notes that **the Airport Improvement Program (AIP)** and its associated Aviation Trust Fund have always been the recipients of a series of dedicated federal excise taxes, paid by aviation users. AIP and its trust fund **should not be viewed as a potential source of deficit reduction funds.** To do so will inevitably lead toa decrease in safety, an unacceptable reduction in the current pace of NextGen implementation, and a decrease in efficiency resulting in increased airline delays. **NASAO firmly believes that our national aviation infrastructure has always been and should always be a federal responsibility.** While the states are ready and willing to assist, as they always have, **the leadership of financing our national aviation system rightly rests with the Administration, Congress, the U.S. D**epartment **o**f **T**ransportation **and** the Federal Aviation Administration (**FAA**).

#### Federal law proves air transportation is not a state right

**FAA/OST 99** - Task Force study (“Airport Business Practices and Their Impact”, October 1999, http://ostpxweb.dot.gov/aviation/Data/airportsbuspract.htm)//MSO

The Airline Deregulation Act of 1978 placed “maximum reliance on competitive market forces and on actual and potential competition” consistent with the public safety, for the provision of the national air transportation system. 49 U.S.C. 40101(a)(6). To prevent state and local governments from impeding competitive market forces in the airline industry, the act prohibited a state or political subdivision from enacting or enforcing any law, rule, regulation, standard, or other provision having the force and effect of law relating to rates, routes, or services of air carriers providing air transportation. 49 U.S.C. 41713(b)(1); 49 CFR 399.110(a) (1997). Additionally, it is the policy of the United States to carry out the airport and airway program to foster competition, consistent with the Airline Deregulation Act’s reliance on the marketplace to provide the needed air transportation system and to encourage new carrier entry into air transportation markets to ensure a more effective and competitive airline industry.

# AT: PFC CP

#### **Increasing PFCs hurts small airports – federal funding key**

Bennett 99 (Grant D., “Funding Airport Infrastructure: Federal Options for Solvency”, Journal of Engineering and Public Policy, August 5th, 1999, http://www.wise-intern.org/journal/1999/index.html)//IIN

Overview The growth of aviation and the needs of airports bring infrastructure spending to the forefront of the aviation debate. Political concerns block the path for dedicated funding of airport infrastructure. As the deadline approaches for the FAA reauthorization, analysis of the problems within infrastructure funding must be addressed to remedy the current situation. Pressing Conflicts and Long Term Concerns Airport infrastructure funding problems start with an increased need for money due to growth in aviation. **The** next **obstacle to be faced involves** supplying proactive funding to airports. These two concerns can only be addressed if problems within current funding mechanism at the federal level are solved. Once necessary funding is linked to airport infrastructure needs, the long term concerns for federal oversight and control can be addressed. Link Funding to Infrastructure As infrastructure needs more money for upkeep and growth, experts in aviation point toadditional funding to solve current airport problems and to stay even with the growth in aviation**.** Federal funding needs to be linked to changes in the aviation system. Ideas like moving the Aviation Trust Fund off budget support the concept thatdedicated user fees should be going back into the system they came from.As aviation gets larger thetaxes collected and funding spent on infrastructure should reflect the growth in system size**.** Even if forecasts for growth and need are wrong, a link between system changes and spending are still not in place. To implement a strong funding mechanism, loopholes in the system must be overcome. Internal Conflicts within the FAA The FAA is essentially reporting limited needs with the presidential budget request in mind. The airport funding proposal the FAA submits to the President has an overall need value based on desired funding levels, giving a false picture of real needs.38 To determine which AIP projects are at the top of the funding list, the FAA uses the National Priority System (NPS). The NPS ranks projects according to criteria vital to the National Plan of Integrated Airport Systems (NPIAS).39 This false sense of need looks at what legislation will address and not at what aviation demand actually requires. This internal conflict of actual demand versus presidential requests clearly presents problems for determining how much funding is really needed. Nonfederal Funding Role **Increasing PFC’s for a large infrastructure burden could have significant negative effects on the NPIAS and small airports.** A Congressional Budget Office report states that large airports could succeed without federal aid if caps on PFC’s were raised or eliminated. **This method would leave smaller airports in a difficult spot to finance capital investment since PFC’s help large airports the most.**40 There port states that small airports’ finances are not all the same, but the federal role of funding is still important. The AIP, with a mission complementary and contrasting to PFC’s purpose, stands to help the national aviation system instead of PFC’s helping individual airports. The federal role in funding airport infrastructure needs to be resolved before system philosophies can be debated. Politics in the System Congressional and presidential control of funding has political themes overpowering the effects of poor infrastructure in the current funding debate. As the benefits from increased investment in airports are proven, the federal surplus, created in part by the Aviation Trust Fund, allows lawmakers to address larger social programs. The political benefits of promoting social security, Medicare and tax cuts limit the solvency of the funding mechanism in the current era. Pushing for strong infrastructure funding will move the fight in the right direction, but the political realm is in the way.

#### PFC tax increase is politically unpopular and hurts the airline industry and economy as a whole

**Baker 11-** Legislative specialist at The Heartland Institute (Nick, “Obama Seeks Higher Airline Ticket Tax,” The Heartland Institute, 4/27, http://news.heartland.org/newspaper-article/2011/04/27/obama-seeks-higher-airline-ticket-tax?quicktabs\_4=1)//JS

The Air Transport Association (ATA), an association representing commercial airlines, also opposes the tax hike. “The **additional** $2 billion in **PFC taxes would raise the cost of travel, harming consumers and the entire travel and tourism industry at a time when policymakers are trying to stimulate the economy**,” the group said in a release. **Obama’s proposal has hit turbulence in both houses of Congress**, where it faces an uncertain future. In separate FAA reauthorization bills passed by the House and Senate for FY 2011, the PFC tax was kept at its current rate, but because of other differences, the bills must be reconciled and passed again by both Houses. If a final version of the bill is sent to Obama’s desk without the PFC increase, it is unclear whether he will sign it. **The Obama administration has repeatedly framed the tax increase as necessary to improve security**. In testimony before the Senate Transportation Committee, Homeland Security Secretary Janet Napolitano said an increase in the PFC is justified given the high number of terrorist threats to airlines over the past two years. ATA President and CEO Nicholas Calio told the House Transportation Committee, “The tax burden on a typical $300 domestic round-trip ticket has nearly tripled since 1972, from $22 [then] to $61 today. **The number of taxes and fees that U.S. airlines and their customers pay has also nearly tripled from 1990 to 2011. The result of this unchecked proliferation is breathtaking.” “Government today should be encouraging the use of air transportation because of its speed, efficiency, and ability to generate jobs, not repeatedly weighing it down**,” Calio said in his testimony. “**New taxes on our already-overburdened industry must be rejected.”**

#### **Raising aviation taxes hurts the economy— UK & Dutch taxes prove**

AOA 10— trade association representing the interests of UK airports (Airport Operators Association, 8/26/2010, “Increases in aviation taxation will damage the economic and social benefits of aviation”, AOA, http://www.aoa.org.uk/increases-in-aviation-taxation.htm)//Bwang

Increases in aviation taxation will damage the economic and social benefits of aviation For the third time in recent years passengers at UK airports will be hit with increased taxes. On 1st November, a family of four visiting relatives in Australia will pay £85 each in tax on top of their air fares, more than twice the amount levied this time last year. The UK government is increasingly out of step with its European partners. Last year the Dutch scrapped their flight tax because of the impact on the economy. The government’s projections show the £2bn currently collected in departure tax is set to almost double to £3.8bn, over the next five years. Ed Anderson, AOA Chairman commented: ‘In August the Prime Minister recognised the role that tourism can play in helping the economy. He said ‘it’s fundamental to the rebuilding and rebalancing of our economy. It’s one of the best and fastest ways of generating the jobs we need so badly in this country.’ We welcome this statement by the Prime Minister; the majority of inbound tourists arrive in the UK through airports, however the increasing level of APD is acting as a significant barrier to attracting tourists to the UK and to the Prime Minister achieving his ambition for the UK to be a top 5 international tourist destination

#### PFCs are politically controversial and hurt the economy

**Moore 11** – The Investment Dealers’ Digest staff writer (Dennis, “Higher Passenger Facility Charges Are Unlikely to Fly,” The Investment Dealers’ Digest, 5/13, Proquest)//JS  
Prospects look dim for U.S. airports to obtain the authority to charge higher passenger facility charges, which would generate more revenue to back bond issues. The PFCs are added to the airfare along with taxes in the total ticket price. They were capped by Congress at $4.50 in 2000. Airports would like to see the cap removed, and lobbied unsuccessfully to get an increase to $7 in the pending House and Senate reauthorization bills for the Federal Aviation Administration. The **airports ran up against a heavy lobbying campaign by airlines to prevent any PFC increase. Though airlines and airports have a symbiotic relationship, their financial interests are not identical. The Washington lobbying is a classic contest of which side will get the better deal from Congress**. "The presumption is that it's set," said Seth Lehman, an airports analyst at Fitch Ratings. In other words, no PFC increase this year. The House and Senate FAA reauthorization bills are now before a conference committee that will work out differences. But neither bill contains a PFC increase. That doesn't necessarily mean it couldn't be added by the conference, and both sides are still pushing their positions. Airports Council International spokeswoman Morgan Dye said the airports haven't given up hope. "We are still lobbying and lobbying hard," she said. Airports want more PFC revenue because bond raters and investors prefer to see that revenue backing bonds over other funding sources, such as landing fees, gate leases, or concessions. PFCs are seen as the airports' most stable source of income. Meanwhile, airport officials ask just who are the airlines, with their $25 baggage fees, to complain about a $7 airport fee? First and foremost, airlines see higher PFCs as a pricing problem. "**An increase in the PFC tax would raise the cost of travel, harming consumers and the entire travel and tourism industry during a time when policymakers are trying to stimulate the economy,"** said Air Transport Association spokesman Steve Lott. "**PFCs, like any other tax, ultimately will reduce demand.”**

#### Solvency deficit - PFCs revenue would be spent on landside projects

Kirk, No Date (Robert S., “CRS Report 98-579, Airport Finance: A Brief Overview”, CRS Report for Congress, http://congressionalresearch.com/98-579/document.php?study=AIRPORT+FINANCE+A+BRIEF+OVERVIEW)//IIN

Airport Improvement Program. AIP provides federal grants to airports for capital development projects. The grants are distributed according to formula or grant criteria in a manner to support national policies and priorities, including the safe operation of airports, minimizing noise impacts, increasing capacity, and improving service to state and local communities. Most AIP money is spent on “airside” projects such as runways, taxiways, aprons and noise abatement or safety equipment. The Federal Aviation Administration (FAA) requires a range of grant assurances from participating airports as a means of implementing federal airport policy. Passenger Facility Charge. PFCs are charges an airport imposes on each passenger boarding at the airport to support capital development. The PFC is not a federal tax. It is a local tax levied at an airport with federal (FAA) approval. PFC funds are more likely to be spent on “landside” projects such as terminals or roads than are AIP grants. State and Local Grants. States and local governments provide grants for airport improvements. Some state and local grants are used to fund federal matching grant requirements.4 State grants are more likely to go to smaller airports than are federal grants.

#### PFCs can’t solve the environment advantage – airports won’t use them for VALE projects

USGAO 8 – (United States Government Accountability Office, “Aviation and the Environment”, GAO Highlights, November 2008, http://www.gao.gov/highlights/d0937high.pdf)//FK

While the number of airports that have undertaken VALE projects is relatively small compared with the number of eligible airports, the number of participants in the program is increasing, as are the range and scope of projects being conducted and the amount of money spent on them. As of September 2008, 9 of the 160 airports that were eligible had or were planning to initiate a VALE project, which is up from 2 participating airports in VALE’s initial year of operation in 2005. FAA expects participation in VALE to increase as more airports become familiar with the program. Although FAA may be correct in its assumption about participation, officials GAO interviewed from 4 nonparticipating airports, and others, such as representatives of airport associations, indicated various reasons for airports not wanting to participate in the program,which is funded through the same sources of funds—AIP grants or PFCs—as other airport development projects. One reason is that some airports have a misperception that VALE projects compete with other projects, such as runways or terminals, for AIP funding. According to FAA officials, this is usually not the case because VALE projects are funded through a discretionary AIP set-aside for noise and emission projects. FAA officials want to increase FAA’s outreach to airports regarding VALE, but noted that the regional staff who are responsible for outreach have limited time for this purpose. VALE projects have ranged from airports’ purchase of fuel-efficient vehicles to projects that help decrease aircraft ground emissions. Expenditures for the VALE program have been nearly $20 million for 20 projects through fiscal year 2008 (with 56 percent of these expenditures occurring in fiscal year 2008). All participating airports have used AIP grants to fund VALE projects for various reasons, mainly because their PFCs have already been committed for high-priority, large-scale terminal improvement projects that may not be eligible for any type of AIP grants.

# Politics

Plan popular – Congress loves GA airports – lawmakers use them for transportation

**Frank, 2009** (Thomas, “Feds keep little-used airports in business”, USA TODAY, Sept. 17, http://www.usatoday.com/travel/flights/2009-09-17-little-used-airports\_N.htm) Megan

**Federal lawmakers have used some of the money to build and maintain** the world's most expansive and expensive network of airports — 2,834 of them nationwide — with no scheduled passenger flights. Known as **general-aviation airports**, they operate separately from the 139 well-known commercial airports that handle almost all passenger flights. In the first full accounting of the 28-year-old Airport Improvement Program, USA TODAY found that **Congress has directed $15 billion to general-aviation airports**, which typically are tucked on country roads and industrial byways. **Members of Congress say the general-aviation airports can attract development and provide services such as air-medical transport. The lawmakers also regularly use general-aviation airports to get around their districts and states, sometimes in planes with lobbyists**. Members of Congress took 2,154 trips on corporate-owned jets from 2001 to 2006, according to a 2006 study by PoliticalMoneyLine, an independent research group.

#### **Plan popular - lawmakers and lobbies love the plan**

USA Today 09 (Anonymous, “Ticket taxes get diverted to fund tiny airfields”; USA Today, September 24, 2009, ProQuest)//IIN

Every frequent flier knows how irritating air travel can be these days: long lines, cramped seats, extra fees for just about everything, and assorted government charges that drive up the cost of a typical $250 roundtrip ticket by 16%. What most passengers don't realize**, however, is** that **a wildly disproportionate amount of** taxes **they're paying** for airport improvements goes to more than 2,800 fields across the USA that they'll never use. Unless**, of course,** they fly on **the** private planes **that these small fields serve.** Since the Airport Improvement Program began in 1982, $15 billion -- about a third of the money collected for the program -- has gone to the smaller airfields with no scheduled passenger flights, according to a USA TODAY analysis published last week. By contrast, the nation's 30 largest airports, which enplaned more than 500 million passengers last year alone, got about $13 billion**.** How to explain such a senseless allocation of taxes? It's the same two words responsible for earmarks and other political distortions: Congress and lobbying. At the start of this decade, Congress reworked the airport program to steer more money to the 2,834 smaller fields, which handle only "general aviation." How it happened is easy to understand. Private pilots with their own planes, and corporations that own jets, make up one of the most formidable lobbies in Washington. Just about every lawmaker has scores of pilots in his district, and many lawmakers have been frequent fliers on private planes. **From 2001 to 2006, lawmakers took 2,154 trips on corporate jets**, according to a study by PolitcalMoneyLine, an independent research group. This flow of forced largesse from commercial air passengers brings business and services to small towns and helps connect rural areas with the rest of the country. Some small airports help relieve congestion at nearby bigger airports. But it would be hard to find fliers who wouldn't rather keep their money or see it spent to improve the airports they use. Besides, USA TODAY's analysis found that half of the small fields are within 20 miles of another private-aviation airport, making many redundant. And in seven states analyzed, 90% of the private-aviation airports operate at less than one-third capacity. For example, the Williamsburg-Whitley County Airport in Kentucky -- built with $11 million in federal funds and boasting a 5,500-foot lighted runway and colonial-style terminal -- sees just two or three flights a day. The powerful groups that represent private pilots (the Aircraft Owners and Pilots Association has been dubbed "the NRA of the air") argue that commercial airports have other sources of federal funds, which they do, and that the nation's small airfields are akin to the nation's highway and road system, which is just silly. Virtually everyone in the nation drives a car, rides in cars or buses as a passenger, or benefits from products moved on the nation's highways. That's not the case with private-aviation airfields, where projects are financed mostly by taxes on passengers who never set foot in them. We don't argue that this network is unnecessary. The Airport Improvement Program, however, wasn't intended to be a piggy bank for the small-plane lobby. Air passengers shouldn't have their pockets picked to fund an extravagance that benefits a select few.

#### **Plan popular – aviation lobbies support**

Staff, 2009 – writer for Aviation International News (Ain, “Aviation lobby groups urge: include NextGen in stimulus”, Aviation International News, January 27, 2009, http://www.ainonline.com/aviation-news/aviation-international-news/2009-01-27/aviation-lobby-groups-urge-include-nextgen-stimulus) // GKoo

In a rare show of unanimity, the Air Transport Association has joined with general aviation and others in lobbying Congress for a $4 billion stimulus package that could jumpstart NextGen and provide many of its benefits during President Barack Obama’s first term. A coalition of 11 aviation-related organizations said that under the FAA’s current plan, NextGen will not achieve significant investment return for the aviation transportation system until 2025. Included in the group are NBAA, the National Air Transportation Association, AOPA and the General Aviation Manufacturers Association. “This is due, in large part, to the challenge of aligning investments in air and ground infrastructure and across the stakeholders–the ‘chicken and egg’ syndrome,” the groups said. “An infusion of stimulus funding would jumpstart this process, dramatically advancing the schedule and resulting in job creation, a reduction in carbon emissions and an air transportation system supporting economic growth.” Under the stimulus proposal, the $4 billion would be used to make grants for 100 percent of the costs to retrofit general aviation and commercial aircraft with NextGen equipment such as on-board avionics, electronic flight bags, cockpit displays, surface moving maps and software upgrades. The groups explained that combining the FAA’s infrastructure modernization with enhanced aircraft equipage and new procedures will create jobs; improve airline environmental performance and reduce CO2; enhance system capacity/operational performance, leading to reduced delays for consumers; reduce FAA operating costs; and establish all-weather access to general aviation airports. Using the FAA’s own methodology for calculating jobs created, the coalition estimated that a $4 billion funding infusion for NextGen would generate 77,000 jobs. Experts estimate that total NextGen implementation will cost $20 billion for FAA program development, deployment and technology acquisition and $20 billion for operators for avionics equipage, training and related costs. “In fact, we anticipate that the FAA will be requesting stimulus funding to accelerate its NextGen infrastructure needs as well as funds to accelerate the needed standards, procedures and criteria that will be required for aircraft to take advantage of the full benefits from equipage,” the coalition said. “Thus, our proposal for stimulus funding should dovetail well with FAA’s NextGen request.” The components of the request total $4.048 billion. Of that, $2.2 billion is for ADS-B, $500 million for RNP equipage, $20 million for FAA Rnav/RNP procedure development, $500 million for LPV procedures development, $458 million for electronic display upgrades and $370 million for ground-based augmentation systems to support precision landings. The coalition is making the request on behalf of the commercial and GA communities. Although $4 billion is only a fraction of the estimated total of $20 billion in required equipage costs, it will provide a sufficient jumpstart to “significantly accelerate these programs and their benefits,” the group added. In early December, many of the same associations sent a joint letter to the House and Senate leadership recommending six priorities for Congress to consider when assembling an economic stimulus package, including funding for airports, investment in NextGen, an emphasis on research and development, legislation to extend accelerated depreciation on aircraft purchases and other initiatives. That 12-member coalition strongly recommended that the following proposals be included in the economic stimulus package: include at least $1 billion for the Airport Improvement Program (AIP); fund $3 billion for NextGen equipage; eliminate the Alternative Minimum Tax penalty on airport private activity bonds; extend the current bonus depreciation provision for aircraft purchases through Dec. 31, 2009, and the placed-in-service date through Dec. 31, 2011; accelerate the increases in the domestic manufacturing deduction; and make the R&D tax credit permanent.

#### **Plan popular – public supports GA airports**

**Berger 08—**President of Venice Airport Coalition (John, 4/23/08, “The VASI Angle”, http://www.veniceaviationsociety.com/archive/NewsLetters/VASIAngleJuneJuly08.pdf)//Bwang \*\*This Venice is in Florida

Yesterday was earth day. Today we watched another half dozen private jets depart Venice airport, consuming thousands of gallons of fuel, polluting the air and contributing to global warming. These airplanes now fill the skies in Florida, and concerns expressed to the FAA requesting a better prioritization of our resources have gone unanswered. On the State level, millions of dollars of FDOT funding is directed to subsidize 80% of the cost of private airplane hangars at general aviation airports. On behalf of Venice Neighborhoods Coalition, I am writing to ask that you make an earnest examination of the massive public support given to general aviation airports and look into how these funds may be better spent supporting commercial aviation that truly assist the public in its transportation needs. We feel that special interests should pay their own way, and we believe the Federal “Use Tax” proposal, which would assist general aviation to pay its own way would be beneficial in this respect. We also feel that the massive FDOT contributions to General Aviation should be reconsidered. Our organization sees massive airport improvement grants to GA airports (and ours in particular) as a subsidy for private flight schools, wealthy corporate jet owners, and special interests. I would like to make this case to you by providing, as an example, the airport we know well.

#### **Plan unpopular - airport legislation is empirically controversial in Congress**

Wollack, 2011 – Program Director of Infrastructure and Sustainability in Federal Realtions (Leslie, “Congressional Impasse on Airport Legislation Continues”, National League of Cities, August 01, 2011, http://www.nlc.org/news-center/nations-cities-weekly/articles/2011/august/congressional-impasse-on-airport-legislation-continues) // GKoo

As the Congressional impasse over an extension of federal airport legislation continues, funds for current and future municipal airport improvements cannot be distributed by the Federal Aviation Administration (FAA) and current revenues are going to the airlines rather than the Airport Trust Fund for the future. Construction funds for municipal airports across the country have been held up by the FAA, due to the shutdown of the government program for the first time in its history. The House and Senate have been unable to reach agreement on another extension of federal aviation programs, which expired on July 22. Congress has passed 19 extensions since September 2009, when the initial legislation expired.  The current disagreement between the House and Senate centers around whether or not to pass a straight extension of current programs or include several policy changes, which were contained in the House-passed extension.  House Transportation Committee Chairman John Mica (R-Fla.) is insisting that the House will not adopt a clean extension of the programs. Some of these contested provisions, including labor issues, have held up agreement on the FAA bill since it expired in September 2009. New to the controversy is the House-passed phasing out of the Essential Air Services Program, which provides subsidies for small airports that would otherwise not receive commercial airline service.  For local governments this means that airport taxes included in airline tickets are no longer authorized and funds collected by airlines are not going into the Airport Trust Fund and will not be available for future airport improvement projects. The FAA also cannot release funding for current projects promised to municipal airports.

#### Plan unpopular - airport funding causes political infighting

**Barrett 12**—Senior Congressional Producer (Ted, 2/6/12, http://articles.cnn.com/2012-02-06/travel/travel\_faa-funding\_1\_faa-funding-measure-senate-committee?\_s=PM:TRAVEL)//Bwang

After passing 23 temporary extensions, the Senate voted 75 to 20 Monday to approve a long-term funding bill for the FAA and sent it to the president for his expected signature. The measure provides about $16 billion a year for FAA operations, airport construction and modernization. It includes safety measures, such as a new satellite-based system for air traffic control, as well as other aviation programs, like one that subsidizes air travel to rural areas. Negotiations over the bill repeatedly stalled over contentious labor issues that congressional leaders finally compromised on in January. Last summer, airport construction projects were halted abruptly when funding temporarily lapsed after Congress couldn't agree on a new extension. "Compromises in the current atmosphere are not easy," said Sen. Jay Rockefeller, D-West Virginia, who chairs the senate committee that handled the measure. "This has been a long process," agreed Sen. Kay Bailey Hutchison of Texas, the top Republican on the committee. Hutchison said she was pleased to get a four-year funding measure finalized because it will provide stability to the industry. "Now our airports are going to be able to start their building projects. They're going to be able to increase their runway space or repair whatever their priorities are that are decided by the FAA," she said.