Future of Aviation Advisory Committee
Record of Meeting
August 25, 2010
Federal Aviation Administration Great Lakes Region Headquarters
Des Plaines, Illinois

Public Announcement

The U.S. Department of Transportation (DOT), Office of the Secretary of Transportation, announced to the public this Future of Aviation Advisory Committee (FAAC) meeting in a Federal Register notice published August 12, 2010 (75 FR 49015).

Committee Members in Attendance

Name	Affiliation(s)	
Susan Kurland *(Committee Chair)*	Assistant Secretary for Aviation and International Affairs	DOT
Juan J. Alonso	Associate professor, Department of Aeronautics and Astronautics	Stanford University
Susan M. Baer	Director, Aviation Department	Port Authority of New York & New Jersey (PANY/NJ)
David Barger	President and Chief Executive Officer	JetBlue Airways Corporation (JetBlue)
Severin Borenstein	Professor, Haas School of Business	University of California, Berkeley (Haas School of Business)
Thella F. Bowens	President and Chief Executive Officer	San Diego County Regional Airport Authority
John M. Conley	International Administrative Vice President and Air Transport Division Director	Transport Workers Union of America (TWU), American Federation of Labor and Congress of Industrial Organizations (AFL-CIO)
Cynthia M. Egnotovich	Segment President, Nacelles and Interior Systems	Goodrich Corporation (Goodrich)
Patricia A. Friend	International President	Association of Flight Attendants (AFA)–Communication Workers of America (CWA), AFL-CIO
Robert L. Lekites	President	United Parcel Service Airlines (UPS)
Ana McAhron-Schulz	Director of Economic and Financial Analysis	Air Line Pilots Association, International (ALPA)
William J. McGee	Travel and Aviation Consultant	Consumers Union
Daniel McKenzie	U.S. Airlines Research Analyst	Hudson Securities, Inc.
Jack J. Pelton	Chairman, President, and Chief Executive Officer	Cessna Aircraft Company (Cessna)
Nicole W. Piasecki	Vice President, Business Development	Boeing Commercial Airplanes (Boeing)
Raul Regalado	President and Chief Executive Officer	Metropolitan Nashville Airport Authority

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Name	Affiliation(s)	
Glenn F. Tilton	Chairman, President, and Chief Executive Officer	UAL Corporation (UAL)
Christopher J. Williams	Chairman and Chief Executive Officer	The Williams Capital Group

Committee Members Not in Attendance

Name	Affiliation(s)	
Bryan K. Bedford	Chairman, President and Chief Executive Officer	Republic Airways Holdings, Inc. (Republic Airways)

Other Officials and Presenters

Name	Affiliation(s)	
Pam Hamilton *(Designated Federal Official (DFO))*	Director of Rulemaking	Federal Aviation Administration (FAA)
John Porcari	Deputy Secretary	DOT
Graham Atkinson	Executive Vice President	United Airlines, Inc. (United)
Randall Bennett	Subject Matter Expert	
Chris Bertram	Chief Financial Officer	DOT
Steve Bradford	Chief Scientist, NextGen	FAA
Carl Burleson	Director, Office of Environment and Energy	FAA
Barry Cooper	Program Office Manager	FAA
Vicki Cox	Senior Vice President, NextGen and Operations Planning	FAA
Bruce DeCleene	Manager	Avionics Systems
Elizabeth Dougherty	Member	NMB
Don Gunther	Senior Vice President for Safety	Continental Airlines
John Heimlich	Chief Economist	Air Transport Association (ATA)
Harry Hoglander	Chairman	NMB
Kevin Knight	Senior Vice President for Network Planning and Revenue Management	United
Jennifer McNelly	Senior Vice President	The Manufacturing Institute
Patrick Murphy	Subject Matter Expert	
Linda Puchala	Member	National Mediation Board (NMB)

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Name	Affiliation(s)	
Karlin Toner	Director of the Joint Planning and Development Office (JPDO)	DOT
Jeanne Yu	Director, Environmental Performance Product Development	Boeing

Background and Welcoming Remarks

This is the record of the third meeting of the FAAC, a Federal advisory committee formed pursuant to and subject to the requirements of the Federal Advisory Committee Act (FACA).

Mr. Barry Cooper, FAA Regional Administrator for the Great Lakes Region, called the meeting to order at 8:31 a.m. and welcomed the committee members and public in attendance to the FAA Great Lakes Region Headquarters. He acknowledged the presence of Mr. John Porcari, DOT Deputy Secretary, and thanked committee members for traveling to Chicago, Illinois. Mr. Cooper provided an overview of the Great Lakes region, and noted the role of the Midwest in aviation. He introduced Ms. Susan Kurland, FAAC committee chair.

Ms. Kurland thanked the Great Lakes team for their effort in planning the meeting. Ms. Kurland introduced Mr. Porcari and described his role as DOT Deputy Secretary, including his experience before joining the DOT.

Mr. Porcari thanked the Great Lakes team for hosting the meeting. He recognized, on behalf of Mr. Raymond LaHood, Secretary of Transportation, the committee's progress. Mr. Porcari stated the DOT's mission is clear: the United States must continue to lead the world in aviation. He noted the FAAC committee's work will result in actions that contribute to ensuring aviation safety and a world class workforce, balancing the industry's competitiveness and viability, securing stable funding for the future, and addressing environmental challenges. Mr. Porcari reiterated Secretary LaHood's desire for actionable recommendations, and noted the real work will begin with the implementation of those recommendations.

Ms. Kurland turned the meeting over to Ms. Pam Hamilton, FAAC DFO, FAA. She outlined her responsibilities as DFO, including maintenance of information on cost and membership, ensuring efficient operations, and keeping publicly available records of FACA activities. Ms. Hamilton briefed the attendees on the purpose of FACA and noted some of its key requirements, including balanced representation, publicly accessible meetings, and committees functioning only in an advisory capacity. She stated there will be two additional public meetings for the full committee in 2010. Ms. Hamilton added the meeting minutes will be made available both in the regulatory docket established for this committee and on the FAAC Web site at http://www.dot.gov/faac. She read the formal statement required under FACA, and listed the safety and security guidelines for the members of the public in attendance.

Ms. Hamilton sought to ratify the minutes from the July 14, 2010, FAAC meeting, and solicited any comments or corrections to the minutes. No comments or corrections were brought forward. On motion, duly seconded, Ms. Hamilton ratified the meeting minutes.

Ms. Kurland introduced the FAAC members and outlined the agenda for the meeting. She highlighted the five issues of interest, or "pillars," identified as priority topics: (1) aviation safety, (2) labor and world-class workforce, (3) financing, (4) competitiveness and viability, and (5) environment. Ms. Kurland reiterated Secretary LaHood's request for specific actionable recommendations regarding these five areas. She explained at the first committee meeting the following five subcommittees and subcommittee chairs were identified: Ms. Nicole Piasecki, Boeing, for Aviation Safety; Ms. Patricia Friend, AFA–CWA, AFL–CIO, for Labor and World-class workforce; Mr. Jack Pelton, Cessna, for Financing; Mr. Bryan K. Bedford, Republic Airways, for Environment; and Mr. Glenn Tilton, UAL, for Competitiveness and Viability. Ms. Kurland noted Dr. Juan Alonso, Stanford University, would serve as chair of the Environment Subcommittee for this meeting in Mr. Bedford's absence.

Ms. Kurland explained the committee charged each subcommittee with developing three to five focus areas. She stated at the July 14, 2010, committee meeting, each subcommittee chair reported the committee's progress and broadly identified focus areas for further exploration. Ms. Kurland reviewed the meeting agenda, which included a presentation on the Next Generation Air Transportation System (NextGen), subcommittee presentations from subject matter experts (SME), and status reports from subcommittee chairs. She stated each subcommittee chair would lead a discussion among the FAAC members to reach consensus on the subcommittee focus areas for the next meetings. She thanked the FAAC members and presenters for their work. Ms. Kurland introduced Dr. Karlin Toner, DOT, Director of the Joint Planning and Development Office (JPDO), who manages an interagency initiative charged with facilitating and developing the NextGen program.

NextGen Presentation

Dr. Toner noted the DOT and FAA have a central role in implementing NextGen, but will not be able to complete NextGen alone; U.S. civil aviation and national security will require other government agencies and industry partners to play a role in NextGen. Dr. Toner explained JPDO is responsible for coordinating research activities, upholding the long-term visions, and identifying strategic areas for policy development. She introduced the panel of four FAA experts who would give presentations on NextGen: (1) Ms. Vicki Cox, Senior Vice President, NextGen and Operations Planning; (2) Mr. Steve Bradford, Chief Scientist, NextGen; (3) Mr. Bruce DeCleene, Manager, Avionics Systems; and (4) Mr. Carl Burleson, Director, Office of Environment and Energy. Dr. Toner stated all subcommittee presentations summarized below can be viewed on the FAAC docket at http://www.regulations.gov, docket number DOT-OST-2010-0074.

Ms. Cox's Presentation

Ms. Cox began her presentation with a brief description of NextGen. She explained NextGen is a wide-ranging transformation of the National Airspace System (NAS) designed to bring aviation into the 21st century. Ms. Cox stated NextGen includes digital communications, broad-based information sharing, and the precision associated with satellite-based capabilities. She added NextGen includes all aspects of aviation, including general and commercial aviation, unmanned aerial systems, and cargo and military operations. Ms. Cox stated the focus of NextGen is maintaining the viability of aviation. She noted NextGen will provide the sophistication and flexibility needed to address future aviation traffic demands.

Slide 2

Ms. Cox noted the broad-reaching impact aviation has on the U.S. economy and the gross domestic product (GDP), such as the movement of cargo and business travel. She further explained reducing the environmental impact of aviation is a key element of NextGen planning.

Slide 3

Ms. Cox stated NextGen planning focuses on the 2018 timeframe. She noted the FAA believes that within this timeframe, it can deliver sufficient capability to transform the air transportation system. Ms. Cox noted the FAA is currently delivering capabilities that are incrementally improving the air transportation system, such as improved surface situational awareness, which can reduce taxi time by 1 to 4 minutes per flight. She added in the future, NextGen will allow the integration of arrival and departure planning with surface traffic movement and automated en route weather updates to take advantage of winds aloft or to avoid weather systems.

Slide 4

Ms. Cox explained the FAA commissioned an RTCA, Inc. (RTCA), task force that included a broad-based membership of aviation stakeholders. She stated FAA planning incorporates RTCA recommendations that are reflected in the FAA's near-term focus on surface movements, runway access, and NAS access.

Slides 5 and 6

Ms. Cox referred to a list of NextGen activities planned for the next 3 to 5 years that address RTCA task force recommendations. She noted the FAA has adjusted its budget to address these recommendations.

Slide 7

Ms. Cox provided a depiction of the NAS in 2011 including Automatic Dependent Surveillance–Broadcast (ADS–B) coverage, most significantly in the Gulf of Mexico where radar was not previously available. She noted new surface capabilities at the Memphis International Airport, John F. Kennedy International Airport, and Orlando International Airport, and tailored arrivals to improve fuel consumption from oceanic routes into, for example, San Francisco International Airport, Los Angeles International Airport (LAX), and Miami International Airport. Ms. Cox further explained general aviation (GA) access to airports has been broadly expanded through the introduction of Wide Area Augmentation Systems (WAAS) lateral guidance with vertical performance routes, which allows instrument access to GA airports without an instrument landing system (ILS) capability. She noted this is achieved without ground-based navigational aids.

Slide 8

Ms. Cox reviewed the FAA's metroplex focus. She stated the RTCA task force indicated the FAA has not sufficiently delivered capabilities for operators to take advantage of equipment on their aircraft today. Ms. Cox stated the focus of the metroplex effort is to deliver these capabilities, primarily to area navigation (RNAV), because 90 percent of aircraft are currently RNAV capable. She explained the effort will begin with one pair of cities and expand over the next several years to additional metroplexes. Ms. Cox stated the FAA has asked RTCA to form a new NextGen advisory committee to track the FAA's performance in providing these capabilities.

Slide 9

Ms. Cox stated the NextGen budget reflects strong support from Congress and the Administration. She noted the FAA's budget alone will not deliver NextGen. Ms. Cox noted aircraft must be equipped to take advantage of NextGen capabilities, and aircraft are a part of the NextGen infrastructure in the 2018 system.

Slides 10 and 11

Ms. Cox noted the cost of equipage varies depending on a number of factors, including whether an operator is forwardfitting or retrofitting an aircraft, the age of the aircraft, and whether the aircraft is a GA or transport-category aircraft.

Slide 12

Ms. Cox pointed out NextGen benefits are significant. She stated by 2018, the FAA anticipates delays can be reduced by 21 percent, which will reduce carbon dioxide (CO_2) emissions and fuel use. Ms. Cox noted extending the timeframe out 30 years increases the benefits.

Slide 13

Ms. Cox emphasized the cumulative benefits of NextGen also are significant and outweigh the costs 2:1. She noted individual operator benefits are more difficult to capture. Ms. Cox stated the FAA projects a breakeven point by 2019, and is focusing on delivering capabilities that will allow an immediate return to the private sector.

Slides 14 and 15

Ms. Cox stated the FAA is looking at various ways to deliver more immediate returns, such as providing benefits to the better equipped aircraft using the policy of "best equipped, best served" and considering financing options for operators.

Mr. Bradford's Presentation

Slide 2

Mr. Bradford began his presentation by addressing new skills the FAA needs to deliver NextGen. He noted a National Academy of Public Administration study assisted the FAA in identifying the skills required to develop and acquire the NextGen infrastructure and operations. Mr. Bradford stated the FAA recognizes air traffic controllers will be working in an emerging environment. He also pointed out FAA technicians will have to maintain legacy systems, such as very high frequency omnidirectional radio ranges (VOR) and ILS, but will need new skills to work with the Internet-based systems.

Slide 3

Mr. Bradford explained NextGen is not about reducing jobs through automation but rather about keeping humans in the center of a task and providing automation assistance so individuals can do their jobs better. He noted there are many considerations, such as how to maintain workforce skills with increased automation.

Slide 4

Mr. Bradford reviewed ongoing human factors studies involving enhanced vision systems, shared separation, advanced data communications, common automation display and interface requirements, and controller selection and training. He described the impacts of enhanced vision systems on the roles of flightcrews and air traffic controllers during approach and landing. Mr. Bradford also noted, in particular, taxing in low visibility when a pilot may see better on the surface than the controller. He discussed the effects of shared separation and the use of ADS–B on the roles of the pilots and air traffic controllers. Mr. Bradford noted the current system is limited by voice communication and, although new data communications allow more complex messages, there are disadvantages such as the impact of losing data communications, which require backup considerations.

Mr. Bradford explained, with regard to air traffic control operations, the terminal controller and the en route controller become a blended operation, especially during the transition from en route to descent approach. He added the FAA worries about the loss of skills for pilots and controllers as automation increases, and the consequences of an automation failure. Mr. Bradford noted it takes a long time to build selection testing and training for future controllers, and the FAA is currently addressing these issues.

Slide 5

Mr. Bradford reviewed recruitment, retention, and labor involvement issues. He noted the FAA has enabling agreements to involve the National Air Traffic Controllers Association (NATCA) and the Professional Aviation Safety Specialists (PASS) in NextGen. Mr. Bradford added that NATCA has a controller assigned to the NextGen office to provide advice to FAA Headquarters. He emphasized the FAA tries to engage the workforce in all phases of NextGen, but there are challenges given the transient nature of the workforce. Mr. Bradford stated the FAA will have to provide state-of-the-art recurrent training so controllers can maintain their skills for dealing with loss of automation situations. He noted that FAA facility modernization will have to evolve to match NextGen.

Slide 6

Mr. Bradford turned to the issue of competitiveness. He noted there are many stakeholders, including various Government agencies, industry, and union stakeholders, with diverse interests who are affected by NextGen. Mr. Bradford explained that integration with the international community, through (1) the International Civil Aviation Organization (ICAO), (2) the International Air Transport Association (IATA), and (3) the European Union/EUROCONTROL Single European Sky ATM Research (SESAR) project, is a key to competitiveness.

Slide 7

Mr. Bradford pointed out the United States actively engages with over 18 other countries in the air traffic system daily. He stated it is important that procedures be consistent so the air traffic is transferred seamlessly. Mr. Bradford noted it is also important for aircraft leaving the United States to be able to use their equipment worldwide. He stated the United States needs to engage the international community on air traffic and aircraft standards.

Slide 8

Mr. Bradford reviewed examples of current NextGen projects. He pointed out the FAA has long-standing action plans with EUROCONTROL on required navigation performance (RNP) and RNAV procedures. Mr. Bradford stated the committee has developed international phraseology and descriptions. He noted in June 2010, the FAA signed an agreement with the European Commission (EC) and SESAR for joint activities, and will have 18 work packages in September 2010 to harmonize standards. Mr. Bradford stated the FAA is working with an ICAO standards roundtable to move the NextGen standards process forward more quickly.

Mr. DeCleene's Presentation

Slide 2

Mr. DeCleene emphasized safety is integrated into the NextGen program rather than NextGen involving a unique set of safety initiatives. He stated it is critical for NextGen to maintain and improve the current level of safety, and described strategies for accomplishing this.

Slide 3

Mr. DeCleene stated the safety management system (SMS) provides the framework for ensuring safety with NextGen. He explained there are four SMS components: (1) safety policy that defines the benchmarks of safety strategies; (2) safety risk management, which provides assurance that the risks of changes have been evaluated and appropriately mitigated; (3) safety assurance for monitoring the system, and identifying the emerging risks and activities to reduce those risks; and (4) safety promotion, which includes a strong safety culture where everyone involved is reporting issues and concerns, and a management structure that responds to those concerns.

Slide 4

Mr. DeCleene described how the Aviation Safety Information Analysis and Sharing (ASIAS) program assists with the safety assurance component of SMS. He stated the essence of ASIAS is to share data among Government and industry partners to identify precursor events for potential future accidents, and to use that data to prevent future accidents. Mr. DeCleene explained many of the NextGen initiatives offer solutions to resolve risks. As an example, he cited a study on terrain awareness and warning system (TAWS) alerts received by aircraft operating in northern California. The study was cited to demonstrate the use of ASIAS studies to identify hazards and develop mitigations. This includes the use of RNAV as a NextGen strategy to move traffic away from hazardous terrain on arrivals into the Oakland International Airport (OAK) and reduce terrain triggering alerts.

Mr. DeCleene noted as the FAA moves forward with NextGen, it is constantly looking to leverage ASIAS data collection with the NextGen set of solutions to reduce risk. He stated other areas of study include terrain collision avoidance systems (TCAS), hard landings, and low visibility operations. Mr. DeCleene emphasized the approach is to use very strong data-driven strategies and take advantage of NextGen solutions.

Slide 5

Mr. DeCleene reiterated the importance of ensuring the safety of new initiatives. He emphasized the importance of applying safety assessments throughout the development of these new technologies and operational initiatives, and noted safety personnel are embedded in the NextGen program offices. Mr. DeCleene further explained every new initiative goes through the safety risk management system, which includes preparing documentation and following orders and procedures of evaluating the potential consequences of the activity should it not work as planned. He added if there are failure modes, determining whether the failure modes are acceptable must be part of the process.

Mr. DeCleene stated consideration is also given to new operational characteristics and what data exists to provide confidence they are acceptable and meet safety criteria. He noted there are flexible methods of compliance appropriate to the criticality of the system. Mr. DeCleene stated the interrelationship of the initiatives is considered (for example, the global positioning system (GPS) is critical to RNAV and ADS–B, and a problem with GPS could affect these systems, so appropriate backup systems must be in place).

Slide 6

Mr. DeCleene explained there are many NextGen implementations that provide not only capacity enhancements, but also safety enhancements such as stabilized approaches using RNP, increased flightcrew situation awareness, envelope protection, and improved collision avoidance. He reiterated as NextGen technologies are implemented, it is important to consider reversionary modes and operation. Mr. DeCleene noted with increased automation on the flightdeck and in ground systems, it is important to remember a common occurrence in every automation system is that it fails at some point, and to consider how these failures will be addressed. He stated new technologies involving highly integrated, complex systems are being implemented in the aircraft and consideration must be given as to how to cost effectively gain the confidence that they are performing as expected.

Mr. Burleson's Presentation

Slide 2

Mr. Burleson stated to achieve the full benefit of NextGen, the environmental and energy challenges must be addressed. He stated, 30 years ago the focus was primarily on noise, with some focus on water quality at airports due to runoff from deicing fluid. Mr. Burleson explained today, the challenges are more complex and include, in addition to noise issues, air quality, climate, and energy issues. He pointed out these issues are interrelated and tradeoffs exist (for example, when a combustor is built to reduce noise, there are air quality and climate impacts). Mr. Burleson also noted increased energy costs have fundamentally reshaped air carrier operations, and in 2005, energy surpassed labor as the largest cost of operations.

Slide 3

Mr Burleson referred to a 2004 report to Congress on aviation and the environment. He noted when Congress established the NextGen effort it included an effort to create an environmental vision. Mr. Burleson also referred to ICAO standards, and pointed out environmental energy solutions must be developed on an integrated global basis. He stated both of these efforts shaped NextGen's vision of providing environmental protection that allows sustained growth. Mr. Burleson emphasized the goal of absolute reductions in noise impacts, air quality impacts, and greenhouse gases.

Slide 4

Mr. Burleson reviewed key initiatives to achieve the NextGen vision:

- Continue local mitigation. The U.S. Government has provided more money than any other country in the world to mitigate local environmental impacts.

- Advance understanding and analytical capabilities. The FAA has launched research initiatives on noise, air quality, and climate impact to ensure it is targeting the correct solutions. The FAA has also developed new analytical capabilities, such as models that allow comparisons of noise versus fuel emissions with regard to the design and operation of aircraft.

- Accelerate operational changes. Mr. Burleson referred to the NextGen operational changes previously discussed by Ms. Cox. He described the 2007 implementation of a continuous descent arrival at LAX that saves the industry approximately 2 million gallons of fuel and has lower noise and emission impacts.

- Accelerate the maturing of aircraft technology. Mr. Burleson noted 90 percent of improvements in the past four decades have been the result of technological innovations in aircraft.

- Develop alternative fuels. Mr. Burleson stated in 2009, the first new alternative fuel in 20 years was certified, and the FAA hopes next year the first new 50 percent bioblend fuel will be certified.

- Establish appropriate policy, standards, and market-based measures. Mr. Burleson stated NextGen is trying to use an environment management systems approach that integrates environmental considerations into all decisionmaking processes. He noted the FAA is looking at market-based measures and incentives, such as using emission trading to reduce CO_2 emissions and loan guarantees to accelerate technology into the fleet.

Slide 5

Mr. Burleson stated NextGen cannot achieve the desired capacity goals in terms of growth, mobility, and employment without solving the environmental issues. He noted energy and climate issues could prove to be the most significant challenges to aviation growth. Mr. Burleson stated NextGen offers an integrated and systematic approach to addressing these challenges.

Committee Discussion

Ms. Kurland invited committee members to ask questions of the panel. Mr. Daniel McKenzie, Hudson Securities, Inc., asked whether air traffic controllers will have adequate, accelerated training in the new system, and whether the FAA has budgeted for this training. Mr. Bradford responded the FAA has an evolutionary path where the capabilities are added one at a time, rather than a single, large transition to the new system. Mr. McKenzie referred to a presentation given to the Financing Subcommittee by Honeywell that indicated the Government's portion of NextGen could be operational

by 2013. He asked whether that was adequate time to allow for training in metroplexes and dual operations. Mr. Bradford noted air traffic controllers already know these procedures, but a present issue is mixed equipage on aircraft, limiting opportunities to take advantage of the more advanced procedures. He stated by 2013, the FAA will have tools to deal with blended traffic.

Mr. DeCleene added the initiatives in the implementation stage of NextGen are best suited for accelerated implementation. He stated the initiatives at the research or development phase may be more difficult to accelerate because the safety data or the analysis of failure modes has not been completed. Mr. DeCleene noted, with respect to global harmonization, it is important to not leave global partners behind if the United States accelerates NextGen implementations.

Mr. Tilton asked what the challenges are to NextGen from a project management standpoint, both historically and moving the project forward. Dr. Toner responded one of the biggest challenges is maintaining and upgrading existing systems while integrating new capabilities. She noted there are discrete windows of opportunity that must be synchronized with research and development implementation. Ms. Cox added another challenge is pulling together so many pieces, such as technology and human factors, safely and in a way the aviation community can embrace. A further challenge is the culture and diverse interests across the aviation stakeholders.

Ms. Friend stated the Labor and World-class Workforce Subcommittee is considering what the impact of NextGen will be on the affected workforce. She specifically asked how NextGen will affect the interaction of dispatchers, flightcrews, and air traffic controllers. Mr. Bradford responded currently there is no interaction between the dispatcher and the air traffic controller. He stated once data communications are implemented, there will be a point during a flight where dispatch will also be more involved with the flightcrew and the air traffic controller. Mr. Bradford noted this occurs today to some extent in the strategic flow program routing of aircraft around large thunderstorms. He stated he expects immediate decisions will continue to be made between the flightcrews and air traffic controllers, and longer term decisions (those beyond 30 minutes) will involve the dispatcher.

Mr. Raul Regalado, Metropolitan Nashville Airport Authority, asked three questions: (1) how are metroplex designations determined; (2) does the alternative fuel effort focus only on jet fuel or does it also address low-lead avgas; and (3) why was the Economic Development Agency (EDA) or the Environmental Protection Agency (EPA) not included as stakeholders in the discussion of NextGen's economic and environmental benefits. He noted the EDA and EPA could be beneficial partners in terms of financing of NextGen implementations and avoiding future obstacles.

Mr. Burleson responded the EPA plays a large role in the regulation of aviation system functions. He stated the Clean Air Act gives the EPA the authority to set emissions standards for aircraft.
Mr. Burleson added the FAA must be consulted for safety and noise issues. He stated the FAA works closely with EPA colleagues at ICAO to set aircraft standards. Mr. Burleson noted Congress did not include EPA as an initial agency when NextGen was set up. He stated it was an oversight and the EPA has participated in the JPDO environmental working group since the beginning.

Mr. Burleson stated, with regard to avgas, the Commercial Aviation Alternative Fuels Initiative (CAFI) effort was set up in 2006 between the FAA, airports, and the airlines to address jet fuel. He recognized this is an issue for GA, and stated the FAA has had discussions with the EPA and industry on how to address it. Mr. Burleson noted the EPA has issued an advance notice of proposed rulemaking that recognizes that half of the airborne lead produced in the United States is attributable to avgas.

Ms. Cox explained the FAA considers a number of factors in designating metroplexes: traffic volume, the number of airports in a surrounding area including secondary airports, the complexity of the airspace, and the equipage of the fleet that uses an area. She indicated beginning this year, the FAA is looking at a broad group of metroplex areas to introduce new capabilities. She noted the FAA will also be looking outside the metroplex areas to introduce capabilities consistent with the "best equipped, best served" policy.

Ms. Piasecki expressed stakeholder concerns that the pace of NextGen development is driven by limited resources rather than technical capabilities and requirements. She added the Aviation Safety Subcommittee has discussed the risks associated with blending old and new technologies. Ms. Piasecki asked whether NextGen will provide for a safer aviation system. Dr. Toner responded safety will not be degraded but noted there is a limit to how fast new technology can be introduced. For example, there are limits to how fast people can be trained and how the changes will be accepted culturally, as well as ensuring an adequate workforce to conduct advanced research. She stated the FAA's plan is well thought out and achievable.

Mr. DeCleene agreed safety will not be degraded under NextGen, and emphasized safety is not just the FAA's responsibility, but industry's responsibility as well. He stated the resource question becomes, "what are the most effective means of oversight, recognizing that industry itself must ensure safety?"

Mr. William McGee, Consumers Union, referred to CO_2 emissions, fuel use, and delay reductions benefit estimates for 2018. He asked what is needed to increase those estimates, particularly regarding delay reductions. He asked whether there are limitations within NextGen itself, or whether the limitations are within the airline system (therefore outside the FAA's control). Dr. Toner responded about 70 percent of current delays are attributable to weather, which cannot be eliminated but can be worked around. She noted the need to balance growth in aviation with protecting the environment. Ms. Cox added one factor that makes it appear as if delay reductions are not as improved, is that delay reduction estimates assume an accompanying growth in traffic. She further added NextGen will provide an opportunity for better managing weather delays, as well as an opportunity to collaborate across all aspects of the NAS to further reduce delays.

Mr. Christopher Williams, The Williams Capital Group, asked about incentives to encourage aircraft equipage of aircraft and how "best equipped, best served" translates into tangible benefits for consumers and operators. Ms. Cox responded the goal is to reduce the costs for the operator who has equipped through, for example, better routing for aircraft with ADS–B Out and continuous descent approaches. She further noted the FAA is developing tools that will allow aircraft equipped for NextGen into a separate queue for more efficient arrival to the airport. Mr. Burleson added an example of the benefits of a "best equipped, best served" policy is the use of reduced vertical separation

minimums (RVSM) to save operators money. He noted airlines equipped to take advantage of RVSM saved a net total of $300 million in annual fuel costs.

Ms. Susan Baer, PANY/NJ, asked for the panel's thoughts on airport capacity constraints and NextGen benefits. She also asked about workforce training other than for stakeholders, and how metroplexing decisions will be made. She noted "best equipped, best served" may be culturally difficult for the FAA because it has not used this approach historically. In response, Ms. Cox stated airport capacity is important for NextGen, which should bring flexibility to the use of existing airport facilities. She noted there often are environmental issues associated with expanding an existing airport. Ms. Cox added a significant goal of NextGen is to increase capacity at existing airports through new technologies and procedures, such as closely spaced parallel approaches.

Dr. Alonso noted the international community has set certain environmental goals and asked what role NextGen has in achieving environmental goals. Mr. Burleson responded that tackling the environmental challenges is at the heart of NextGen and cited the Continuous Lower Energy, Emissions and Noise (CLEEN) program and alternative fuel efforts. Mr. Burleson stated aviation and climate change will be discussed at the upcoming ICAO meeting. He noted the world is split on this issue. Europe has taken the position that aviation carbon emissions should be 10 percent below 2005 levels by 2020, while large numbers of developing countries want to do very little. He stated the United States is in the middle, and using the NextGen program, the United States aspires for carbon neutral growth by 2020, using a 2005 baseline. Mr. Burleson stated this is potentially achievable if NextGen infrastructure and equipage are in place according to the developed timelines, which would make the U.S. aviation industry a leader in the international arena.

Ms. Cynthia Egnotovich, Goodrich Corporation, asked how much of the NextGen benefits would be realized by 2018 and what the committee can do to assist the process. In response, Ms. Cox stated the 2018 benefits estimates are conservative, particularly the 21 percent delay reductions. In terms of cost reductions, the cumulative benefit recovery is in 2019, assuming operators are equipped to take advantage of NextGen. She noted most of the benefit results from reduced fuel use and delays, with very little of the cost savings for the FAA. Ms. Cox explained benefits will continue beyond 2018 but this is as far as the FAA can currently estimate. Dr. Toner noted pressure needs to be maintained on implementation, as well as on research and development, to solve the environmental challenges. Mr. Burleson cited a Thomas Friedman article on transitioning to a green economy and the need to marry mother nature and father greed. He suggested market incentives must be aligned with needed technology to produce NextGen.

Ms. Kurland thanked the NextGen presenters and stated the committee would welcome ideas from the presenters on how the committee can be helpful.

Following a 10 minute committee break, Ms. Kurland noted each subcommittee has SMEs who will make presentations to the committee. Ms. Kurland explained that following the presentations, each subcommittee chair will report on subcommittee activities and lead a discussion among the full committee members to reach consensus on the issues going forward. Ms. Kurland turned the meeting over to Mr. Pelton, Financing Subcommittee chair.

Committee Reports

Financing

Mr. Pelton stated, in trying to identify issue areas to present to the FAAC, the subcommittee required education on NextGen and how the FAA is funded. At the subcommittee's August 17, 2010, meeting, the subcommittee heard briefings from six SMEs, and found the briefing of Mr. Chris Bertram, DOT Chief Financial Officer, on FAA funding very beneficial. The subcommittee felt Mr. Bertram's briefing would benefit the other subcommittees. Mr. Pelton turned the meeting over to Mr. Bertram.

Slide 2

Mr. Bertram explained FAA funding is unique because its capital programs and some of its operations are funded through a trust fund. He reviewed the FAA's fiscal year (FY) 2010 budget to explain the agency's funding sources. Overall funding for the FAA is approximately $16 billion, with $10.6 billion from the trust fund and $5.3 billion from the general fund. Mr. Bertram stated the trust fund provides funding for facilities and equipment, modernization programs, grants in aid for airports, and research and engineering. He noted the FAA has split operations funding. He explained the trust fund was originally established in 1970 to pay the FAA's capital costs but over time it has also paid for part of FAA operations.

Slide 3

Mr. Bertram reviewed the operations budgets for specific areas within the FAA and noted the majority of the operations budget ($7.3 billion of the $9.3 billion budget) is allocated to the day-to-day operations of the air traffic system. This includes 15,600 air traffic controllers and 6,000 technicians who maintain the system. The second largest amount of the budget is allocated to Aviation Safety, which employs approximately 6,400 inspectors and individuals who set aviation standards. Mr. Bertram explained the remainder of the budget is allocated to Commercial Space Transportation and staff offices, including the Office of the General Counsel and the Administrator's office.

Slide 4

Mr. Bertram stated Grants-in Aid for Airports, also known as the Airport Improvement Program (AIP), has a $3.5 billion budget, which has been at that level for 5 to 6 years. He noted most of this money involves grants to airports based on legislative formulas; the remainder involves discretionary grants for projects selected by the FAA.

Slide 5

Mr. Bertram reviewed the facilities and equipment budget that funds the FAA's capital costs. These capital costs include funding for NextGen; new facilities, centers, towers, and radar; and acquisitions personnel.

Slide 6

Mr. Bertram reviewed FY 2010 NextGen funding, which is $867,706,000. He noted NextGen funding sources include facilities and equipment, research and engineering, and operations budgets. He further stated the portion of the FAA budget dedicated to the NextGen budget was recently proportionately increased, and the President's proposed NextGen budget pending before Congress for FY 2011 is $1.1 billion.

Slide 7

Mr. Bertram stated the FAA trust fund is funded through various user taxes, including passenger ticket, frequent flier, and fuel taxes. He noted the tax rates are set in FAA reauthorization bills and result in the collection of approximately $10.5 billion; this goes into the trust fund and Congress then appropriates the money for the FAA's capital costs and a portion of its operating costs.

Slide 8

Mr. Bertram provided a chart depicting FY 2009 taxes by aviation user groups.

Slide 9

In response to the Aviation Safety Subcommittee's request, Mr. Bertram provided a table depicting historical funding of the FAA from FY 2001 through 2010 that illustrated steady funding increases. The table also included a breakdown of the operations funding between the trust fund and the general fund. Mr. Bertram noted this amount varies over time depending on the amount the appropriations bill assigns to the trust fund versus the general fund.

Slide 10

Mr. Bertram also provided information on the trust fund cash balance for FY 2010 as requested by the subcommittee. He pointed out the cash balance for the end of FY 2010 increased slightly to approximately $9.1 billion from approximately $8.8 billion. Mr. Bertram explained there are two balances in the trust fund: the cash balance, which is the amount of cash actually in the fund, and the uncommitted balance, which is available to make additional commitments and is lower than the cash balance. He noted the DOT and FAA work hard to maintain the uncommitted balance, which is currently just under $1 billion, at a relatively stable amount.

Mr. Pelton invited questions from committee members.

Committee Discussion

Mr. MacKenzie noted NextGen and modernization initiatives are generating incremental economic benefits, and asked, given that incremental benefits could be realized more quickly, what are the prospects that Congress will appropriate additional money to the trust fund. In response, Mr. Bertram stated adding money to the trust fund would require an additional tax source. He noted the current appropriations bill has some slight increases in fuel taxes but, overall, Congress has decided to keep the trust fund tax rates at the current levels. Mr. MacKenzie clarified he meant to refer to the general fund. Mr. Bertram stated if Congress wanted to provide more funding, the effect on the Federal deficit would be the same regardless of the source; therefore, the issue is whether Congress wants to provide more funding. He noted the funding for NextGen, versus funding for the legacy systems, has changed as NextGen implementation progresses.

Ms. Thella Bowens, San Diego County Regional Airport Authority, questioned the long-term viability of the trust fund regarding demands that will be placed on the funds from various sectors, primarily airports. She added NextGen will likely add to the stress on the trust fund. She noted, according to the Congressional Budget Office (CBO), the trust fund is not growing at a rate necessary to cover projected needs. Ms. Bowens asked how increasing airport needs will be met when there are no additional resources. Mr. Bertram noted the main source of airport funding is the AIP, which has been funded at $3.5 billion since 2006. He reiterated the goal of maintaining a stable balance in the trust fund and noted there is some ability to increase funding from the general fund to keep the trust fund balance stable. In addition, there are some expected increases in receipts to the trust fund in the future. He stated the AIP, which provides about one-third of airport funding, has been relatively stable and there are other sources of airport funding depending on the particular airport.

In response, Ms. Bowens noted the FAA projects airport capital needs at approximately $50 billion between 2013 and 2017, while the airport industry projects needs of $94 billion. Given an average of $72 billion in projected needs, she asked how the trust fund will remain viable without new funding sources. She stated trust fund revenues have not been increasing at the same rate as in the past because of reduced airport operations. Mr. Bertram responded there have been some general fund contributions every year since 2001. He stated if Congress continues its policy of prioritizing capital improvement funding, including AIP, the hope is the trust fund will remain a stable and viable financing mechanism for the FAA's capital requirements.

Mr. David Barger, JetBlue, asked whether NextGen has the appropriate attention in Washington, DC, relative to competing budget interests. Mr. Bertram noted 3 to 4 years ago, NextGen funding was approximately $200 million to $300 million, and 2011 NextGen funding is expected to be $1.1 billion, which demonstrates NextGen is a priority for DOT and Congress. Mr. Barger asked whether the $40 billion equipage cost for NextGen is accurate and where that burden will fall. Mr. Bertram responded there is a Federal cost and an industry cost for capital and operations, and some airports will need to add capacity. Mr. Bertram offered to provide more cost information to the committee. He also noted the FAA publishes information on its capital improvement program that details the next 5 years of capital spending and includes NextGen information.

Mr. Regalado expressed concern that even though AIP funding is stable, the net amount of funding to airports is decreasing while capital requirements are increasing. He noted the Office of Management and Budget (OMB) has questioned the continued viability of the trust fund. Mr. Bertram reviewed the allocation of AIP funds. He reiterated the commitment to keep the trust fund viable and stated DOT works with OMB and Congress to achieve this goal.

Mr. John Conley, TWU, AFL-CIO, asked if the tax information is readily available to the consumer and whether the flight segment tax is static. Mr. Bertram responded the flight segment tax is imposed on each takeoff and landing, and the rate is adjusted annually for inflation. He believes the taxes appear on a passenger's ticket. Mr. Conley asked whether the commercial jet fuel tax would be applicable to the consumer. Mr. Bertram stated the jet fuel tax would not appear on the ticket. He further explained the differences between the various fuel taxes.

Mr. MacKenzie asked whether there would be funding shortfalls if NextGen is accelerated.
Mr. Bertram reiterated the funding for NextGen has grown and he is not aware of any easy acceleration of NextGen by simply increasing funding. He does not believe NextGen is being slowed down because of a lack of funding commitment.

Ms. Piasecki inquired about the status of the Administration's suggested shift from taxes to user fees.
Mr. Bertram responded the 2011 budget is based on traditional funding rather than user fees. He stated Congress has indicated it intends to continue with the current funding system for the next 2 years.

Ms. Bowens asked if the budget includes the increased staffing costs associated with NextGen.
Mr. Bertram stated the main NextGen projected costs are for equipment and facilities and, although it is too early to determine FAA staffing, a large increase in staffing is not anticipated.

Mr. Pelton thanked Mr. Bertram. Mr. Pelton noted there has been much concern about NextGen funding, given the importance of NextGen. He stated the subcommittee has identified four important issues for consideration:

1. Review project eligibility criteria for airport programs, such as AIP, passenger facility charges (PFC), and other rates and charges, with the recognition that NextGen requires funding for airport infrastructure.

2. Consider the public policy case for the use of funding tools such as grants, low interest loans, loan guarantees, and tax credits, as incentives for aircraft equipage and NextGen enhancements.

3. Examine the benefits of alternative minimum tax (AMT) relief for airports.

4. Explore the operational issues that accompany FAA implementation of the "best equipped, best served" policy.

Mr. Pelton asked for the full committee endorsement of these four issues. With no comments from the committee, Mr. Pelton indicated the Financing Subcommittee will move forward with its work.

Ms. Kurland then turned the meeting over to Ms. Piasecki, chairman of the Aviation Safety Subcommittee.

Aviation Safety

Ms. Piasecki reviewed the five areas of the Aviation Safety Subcommittee's focus:

1. Better sharing and protection of safety data information. Ms. Piasecki emphasized this is essential to improving an already safe aviation system. She stated the key is how to incentivize participation in sharing data.

2. Identification of the priorities around safety to ensure effective risk management. Ms. Piasecki noted a similar process was undertaken with the Commercial Aviation Safety Team (CAST) in the late 1990s.

3. NextGen safety enhancements. She stated the subcommittee believes safety needs to be a design criterion.

4. Promotion of a just culture for safety. Ms. Piasecki emphasized the advantages of SMS will only be realized if safety is embedded in the culture. She stated the subcommittee is identifying where strong safety cultures exist in the industry and what policies foster such a culture.

5. Review of tactical, everyday safety issues such as bird and wildlife hazards and child safety seats on aircraft.

Ms. Piasecki introduced Mr Don Gunther, Senior Vice President for Safety, Continental Airlines, for a presentation on data sharing benefits. Ms. Piasecki stated Mr. Gunther is the CAST co-chair, a member of the Flight Safety Foundation, and industry co-chair of the ASIAS Executive Board (AEB).

Slide 2

Mr. Gunther reviewed the benefits of data sharing. He noted data sharing produces a better platform for sound analysis of emerging safety threats; and a data driven safety approach assists in identifying the proper mitigation for these threats. Mr. Gunther explained additional benefits of data sharing are data fusion, data-driven decisionmaking, and data-driven investment and resource allocation decisions. Data fusion provides an overall view of how aircraft operations, air traffic procedures, and national policies interact. He pointed out the better the data, the better the decisionmaking process in the safety arena and, with the right data, safety funding can be properly allocated.

Slide 3

Mr. Gunther explained ASIAS is a collaborative effort between Government and industry for sharing data and analysis, and is used to identify precursors to accidents and incidents. He noted this effort has occurred in the last 3 to 4 years.

Slide 4

Mr. Gunther reviewed the basic principles governing ASIAS:

- Data is used only for safety advancement.
- Reporting is nonpunitive. Mr. Gunther stated, in his experience, the two programs that have enhanced safety over the years are the Aviation Safety Action Program (ASAP) and Flight Operational Quality Assurance (FOQA) program. He explained ASAP is a self-reporting program for aviation personnel, and FOQA provides objective aircraft flight performance data. He stressed the importance of the voluntary nature of these programs.
- Sensitive data is deidentified. Mr. Gunther stated this includes air carrier, crewmember, and ground personnel information.
- Analyses are approved by the AEB.
- Data is protected and aggregated. Mr. Gunther explained, as ASIAS grows and is more successful, there will be more demands on ASIAS; the key will be protections for the information and the analyses.

Slide 5

Mr. Gunther reviewed the five types of proactive safety analyses:

1. Directed studies. He explained these studies are presented to AEB from, for example, the MITRE Corporation, which aggregates the protected data, combines it with publicly available data, and develops an analysis of events. The AEB then directs a study, MITRE completes the analyses and, in most cases, this information is then provided to CAST. Mr. Gunther noted CAST has done a fabulous job of reducing aviation accidents over the last 10 years, and has moved from a forensic approach to a more proactive data-driven safety approach.
2. Known risk monitoring. Mr. Gunther stated known risks, such as unstable approaches, can be monitored for trends, and trends can then be addressed.
3. Safety enhancement assessments. Mr. Gunther stated CAST has produced over 60 safety enhancements over the years and their effectiveness can be assessed through ASIAS.
4. Vulnerability discovery. He noted an individual air carrier may not recognize an issue that can be identified and addressed when industry data is combined.
5. Benchmarking operations. Mr. Gunther explained benchmarking is the most important analysis from the industry perspective, and allows an air carrier to compare its operations to the industry and adopt appropriate mitigations.

Slide 6

Mr. Gunther presented a list of ASIAS partners, including the FAA, labor and industry organizations, manufacturers, and individual air carriers. He emphasized ASIAS has 32 partner air carriers providing protected data that produces a great deal of information about operations in the NAS.

Slide 7

Mr. Gunther provided a list of data sources for ASIAS studies that includes proprietary data from ASAP, FOQA, the Air Traffic Safety Action Program (ATSAP) and manufacturers, safety data from the FAA, the National Aeronautics and Space Administration (NASA), the National Transportation Safety Board (NTSB), and other air traffic control data.

Slides 8 through 12

To illustrate the value of data fusion, data-driven decisionmaking, and effective interventions, Mr. Gunther presented a depiction of the area around OAK with traffic tracks, minimum vectoring altitudes, airport and airspace procedures, and safety event focus. He explained TAWS warnings were being received. Based on a study of this information, RNAV/RNP was used to reduce the risks, and minimum vectoring altitudes were revaluated; GPS enhanced software upgrades eliminated much of the problem.

Slide 13

Mr. Gunther commended CAST for its strong support of ASIAS. He noted there were early concerns about CAST's deliberate structured approach to studying accidents, and that CAST would not be able to take a more proactive approach using just data and be responsive in a timely manner. Mr. Gunther stated CAST's vision is to reduce air carrier accidents worldwide. Its mission is to enable continuous improvements, and safety enhancements are an important part of that mission. He explained by being a part of ASIAS, CAST is able to extend its mission. Mr. Gunther stated CAST's initial goal was an 80 percent reduction in accidents by 2007; by 2008 there was an 83 percent reduction in fatality rates.

Slide 14

Mr. Gunther presented a list of CAST industry and Government members. He noted that the correct stakeholders are looking at the correct issues and identifying solutions that are vetted through the appropriate channels. He pointed out CAST's relationship with ASIAS is very important in developing safety enhancements.

Slide 15

Mr. Gunther discussed a bar graph depicting ASIAS results combined with CAST results. He pointed out, through 2007 the graph illustrates a 70 percent accident reduction at a cost of approximately $400 million to $500 million and a goal for 2020 of a 75 percent accident reduction at a cost of approximately $600 million. He noted that implementing all CAST projects would net an additional

accident reduction of 5%, but at a cost of $5 billion, and cited this as an example of the need to balance financial and safety management.

Slide 16

Mr. Gunther offered the committee areas to consider:

- Ensure findings from safety programs, such as CAST and ASIAS, are used in NextGen to prioritize solutions and address tactical safety issues.

- Ensure continued data analysis and sharing programs through long-term funding, and accelerate these programs to provide benefits to the flying public. Mr. Gunther emphasized the importance of protecting data and maintaining trust between Government and industry.

- Programs such as CAST and ASIAS should serve as a model for programs in other segments of the aviation community. As an example, he noted the helicopter community is modeling a program after CAST, which is reducing accidents in that industry.

- Ensure protection for voluntarily supplied information.

Committee Discussion

Mr. Tilton asked what challenges the uncertainty regarding NextGen and its implementations pose. In response, Mr. Gunther provided an example involving a difficult airport arrival where FOQA data indicates the risks are high. The use of an RNAV arrival would reduce the risks, but not all aircraft are RNAV-capable. He noted it is important to ensure the benefit warrants the cost to industry. Mr. Tilton asked whether the consequences of incentives have been considered with regard to more favorable routing. Mr. Gunther responded it is important to be equitable and determine what delivers the most safety benefit given the available resources.

Mr. Regalado noted neither the FAA Airports office nor the airport industry are CAST members and asked whether airport safety was a concern of CAST. Mr. Gunther indicated airports were a concern and CAST has an observer for airports. In addition, the CAST membership committee currently is reviewing this issue.

Mr. Barger asked whether there are any lessons learned from CAST regarding how to attract talented individuals to the aviation and aerospace industry. Mr. Gunther stated CAST and ASIAS must obtain SMEs from industry and noted there is a need to identify talent from other sources. CAST has not studied this but it is a concern with regard to developing future safety managers. Mr. Barger asked whether there has been consideration of giving universities such as Purdue University or Embry-Riddle Aeronautical University observer status. Mr. Gunther indicated there is contact between CAST and those communities, and it is beneficial to familiarize individuals from those communities with, for example, FOQA and ASAP programs.

Ms. Baer referred to Mr. Gunther's comments on other segments of the aviation industry that are modeling programs after CAST. She asked how that process could be accelerated and how this might benefit aviation safety. Mr. Gunther noted CAST has an international outreach, and Europe, Latin America, and Asia have safety organizations that have adopted CAST safety enhancements. He further stated ASIAS is still maturing, and data from all sources, such as business and military aviation, is necessary for a complete understanding of the national airspace. Mr. Gunther added the challenge will be to bring all the data together.

Ms. Egnotovich asked how this process will evolve from a global perspective. Mr. Gunther stated the biggest challenge is cultural, regarding human factors training and managing automation.

Mr. Pelton noted the inclusion of GA in ASIAS and he encouraged ASIAS to reach out to the General Aviation Manufacturers Association and the National Business Aviation Association.

Ms. Piasecki thanked Mr. Gunther for his presentation. She reviewed for the committee the expert presentations at the Aviation Safety Subcommittee meeting the previous day.

Ms. Piasecki stated Ms. Peggy Gilligan, FAA Associate Administrator for Aviation Safety, summarized how the FAA is taking a proactive approach to reach the next level of safety. Ms. Gilligan discussed the need to identify overall system safety performance rather than individual system component performance. Ms. Gilligan also highlighted the importance of the open exchange of safety information and discussed the role of ASIAS. Ms. Piasecki stated after the presentation, there was a lively conversation during which Ms. Gilligan discussed some of the barriers regarding ASIAS and achieving the next level of safety:

- The need for a cultural change from analyzing data to a more predictive approach to preventing events.
- The need for investment and continued funding of technical capabilities such as data fusion and the ability to measure emerging threats.
- Data protection.
- Resources and funding.

Ms. Piasecki also summarized the presentation of Mr. Bill Voss, President of the Flight Safety Foundation. She stated Flight Safety is a global leader in improving aviation safety and as an independent, nonprofit organization, it is in a unique position to identify global safety issues. Mr. Voss addressed a variety of issues that need attention, including legislative proposals for stronger protection of volunteered aviation safety information. Regarding NextGen, Mr. Voss commented that old errors will meet new technology and encouraged the systematic testing for human errors. Mr. Voss also challenged the subcommittee to consider that new technology is built on old systems; for example, digital systems using analogue data of low quality. Other topics Mr. Voss discussed included robust training.

Ms. Piasecki reviewed for the committee the presentation of Mr. Brad Brugger, the International Coordinator for Safety of Flight and Compliance for the Transport Workers Union. Mr. Brugger emphasized the need for a robust SMS as a key element of a safety culture. He reviewed research from various institutes to outline key indicators, characteristics, and values found in safety cultures. Mr. Brugger also discussed a "just" safety culture in contrast to a secretive culture.

Ms. Piasecki also summarized the presentation of Mr. Tom Bradley, Professional Airways Systems Specialists, which represents FAA personnel who maintain and repair traffic control and navigation systems, and FAA inspectors. Mr. Bradley led a discussion on the outsourcing of maintenance and the appropriateness of FAA oversight. Ms. Piasecki also noted there was representation from Cessna at the subcommittee meeting, which was very useful and important.

Ms. Piasecki stated the presentations affirmed that the subcommittee's five focus areas require an overall umbrella of SMS. She noted the pillars of SMS are built on a foundation of a strong safety culture. She concluded by requesting comments from the committee on the subcommittee's five focus areas.

Mr. McGee commented the committee has heard from many experts who provided much information to consider, and stated there would clearly not be consensus on all issues. With regard to safety, Mr. McGee noted the discussions on the value of voluntary programs and importance of corporate culture. However, he asked that the conversation return to the issues of FAA oversight and enforcement. Mr. McGee pointed out the hope is that all corporations invest in stronger corporate cultures and safety initiatives, but there are worst practices in addition to best practices. He reiterated the twin issues of regional air carrier oversight and maintenance outsourcing and stated, from a safety standpoint, the industry hears that there is one level of safety. He asked how to ensure (1) one level of safety and (2) the FAA has the tools and resources to go where the work is being done whether it is inside or outside the United States.

Ms. Ana McAhron-Schulz, ALPA, expressed concern that some air carriers are barely able to afford implementation of basic safety programs. Ms. Piasecki referred to the discussions about cost-benefit analyses and how to drive changes and mitigate risks before accidents.

Mr. Conley expressed a belief that there was fundamental agreement on criminal history and record checks. He stated those are fundamental processes and there should be one set of thresholds and criteria. He added it should not matter which airport or personnel position is involved; the standards should be raised to prevent any individual who might compromise safety from coming into a sensitive area.

At the close of the discussion on safety, Ms. Hamilton reminded the FAAC members they should not discuss any FAAC business among themselves during the lunch break and solicited a motion for a temporary adjournment. On motion, duly seconded and approved by the majority of the FAAC members present, the FAAC adjourned at 12:15 p.m.

The meeting resumed at 1:11 p.m. After welcoming FAAC members and other attendees back from lunch, Ms. Kurland explained the afternoon session would begin with a report from Mr. Tilton, Chair of the Subcommittee on Competitiveness and Viability. She then turned the meeting over to Mr. Tilton.

Competition

Mr. Tilton noted the Subcommittee on Competitiveness and Viability's duty is to balance the industry's competitiveness and viability both domestically and internationally, in recognition that a competitive airline industry is critical to the national economy. He explained, to this end, the subcommittee is charged with—

- Examining changes in the operating and competitive structures of the airline industry.
- Considering innovative strategies to open new international markets and expand commercial opportunities in existing markets.
- Investigating strategies to encourage the development of cost-effective, cutting edge technology and equipment critical for a competitive industry coping with increasing economic and environmental challenges.
- Examining the adequacy of current Federal programs to address (1) the availability of intermodal transportation options and alternatives, (2) small and rural community access to the aviation transportation system, (3) the role of State and local governments in contributing to such access, and (4) how the changing competitive structure of the U.S. airline industry is likely to transform travel habits of small and rural communities.

Mr. Tilton stated the subcommittee held three meetings with excellent attendance, and future meetings will be held on October 15, 2010, and November 18, 2010. He explained the subcommittee's goal for those meetings will be to develop issue areas for consideration by the FAAC and Secretary LaHood. Mr. Tilton indicated many of the issues before the subcommittee are shared by other subcommittees and in some instances they have deferred to other subcommittees, such as on financing of infrastructure and modernization. He stated the subcommittee agreed to focus on three broad topics:

1. Ensuring unfettered access for U.S. airlines to the world's largest and fastest growing global markets. Mr. Tilton noted the working group addressing this topic is composed of Ms. Friend, Ms. McAhron-Schulz, Mr. McGee, and Mr. Tilton.
2. Challenges to U.S. airlines' industry viability: aviation tax burden and jet fuel price volatility. Mr. Tilton explained the subcommittee will work with the Financing Subcommittee on this issue. Working group members are Ms. Baer, Mr. Bedford; Dr. Severin Borenstein, University of California, Berkeley; Ms. McAhron-Schulz; Mr. McKenzie; Mr. Pelton; Mr. Tilton; and Mr. Williams.
3. Air passenger and community access challenges with consideration of (1) whether the DOT and FAA should develop a comprehensive intermodal policy to more efficiently and economically

facilitate the movement of passengers and goods among transportation modes; (2) ensuring passengers have real-time access to information on fares, fees, and flight status in a manner that does not impair the airline industry's competitiveness and viability; and (3) improving airline and passenger access to congested airports and small and rural communities. Working group members include Ms. Baer, Mr. Bedford, Dr. Borenstein, Ms. Friend, Ms. McAhron-Schulz, Mr. McGee, Mr. Pelton, and Mr. Williams.

Mr. Tilton turned the meeting over to Mr. Randall Bennett and Mr. Patrick Murphy for a presentation entitled "Airline Competition: Current Assessment and Looking Ahead." Mr. Murphy gave the presentation.

Mr. Bennett's and Mr. Murphy's Presentation

Slide 2

Mr. Murphy explained to the committee he would be discussing studies he and Mr. Bennett conducted on airline competition. In 2006, Mr. Murphy and Mr. Bennett realized the Government had not done an assessment of the airline industry since 2000. Therefore, they designed a study using data beginning in 1995 to assess the industry, and they obtained funding from United for the study. In 2007, they also conducted a study on domestic competition, and in 2009, they added international alliances to the study. They briefed four Federal agencies, three congressional committees, the U.S. Government Accountability Office, and numerous trade associations on the studies.

Slide 3

Mr. Murphy explained there are two different business models currently operating in the industry:

1. Low-cost air carriers operating primarily in larger markets with a focus on connecting traffic over hubs. These air carriers typically target price-sensitive travelers but are also beginning to serve last-minute business travelers.

2. Network air carriers who rely on passenger flows over hubs from communities of all sizes, and internationally. These air carriers have limited capacity for price-sensitive demand given the presence of the low-cost air carriers.

He noted these two models lead to intense competition and service for a broad spectrum of demand.

Slide 4

Mr. Murphy explained they measured competition by traditional methods and determined the industry was continuing to be highly competitive:

- Average fares and yields declined so that domestic yields today, when adjusted for inflation, are one half what they were in 1978 at the time of deregulation.

- Competition at city-pair level remains vigorous with 20,000 city pairs in the United States.

- Low-cost air carriers are entering more markets.

- Hub premiums have declined substantially. He explained 10 years ago there was a concern network air carriers were charging high fairs at hubs; that issue has almost disappeared, given the low-cost air carriers.

Slide 5

Mr. Murphy stated their first major finding was that the industry has undergone major structural changes, representing a reversal from the situation in the mid 1990s. He noted the low-cost air carriers have replaced the network air carriers as price leaders and are the drivers of growth in the domestic market. Mr. Murphy and Mr. Bennett believe this structural change is not likely to change, but the low-cost air carriers and network air carriers can coexist by targeting different segments of demand.

Slide 6

Mr. Murphy's and Mr. Bennett's second finding was that the old domestic fare structure collapsed in 2000. He explained this was a disaster for the network air carriers because their costs were escalating while revenues were declining. As a result of the pricing collapse, the network air carriers permanently lost $11 billion in annual revenue. Mr. Murphy and Mr. Bennett believe this change was the result of (1) the "dot.com" collapse and the accompanying decline in business travel; (2) the growth of Internet ticket sales, which resulted in fare transparency; and (3) the emergence of the low-cost air carriers. He noted the network air carriers have been profitable in only 1 year in the last decade.

Slide 7

Mr. Murphy discussed the current state of low-cost air carriers: (1) Their costs continue to be one-third lower than network air carriers; (2) They continue to experience high growth with 35 percent of the domestic passenger market; (3) They have been profitable in almost every year over the last decade; and (4) They are poised to compete internationally. Mr. Murphy stated it is significant for policymakers to note that the low-cost air carriers serve very few small communities.

Slide 8

Mr. Murphy reviewed the study's findings regarding network air carriers. He explained they have (1) become 35 percent smaller in the last decade; (2) lost most of their domestic pricing power even where they are not competing with low-cost air carriers; and (3) even after heroic measures and bankruptcies, have not been able to close the price gap. He pointed out the network air carriers serve over 300 small communities to provide flow to their network, and they are increasingly focused on international growth; this has resulted in $3 billion of additional annual domestic traffic flow revenue.

Slide 9

Mr. Murphy explained the international routes have become more important and support the network air carrier's ability to compete with the low-cost air carriers. He emphasized these air carriers need this global network to remain competitive. Mr. Murphy stated alliances are the second best business strategy for network air carriers because they cannot merge for legal reasons. He explained the alliances support growth and competition. He noted only 220 of the 70,000 transatlantic city pairs have nonstop service, so alliances are critical. Mr. Murphy and Mr. Bennett examined transatlantic growth, costs, prices, and profit margins since alliances formed in 1991. They found the transatlantic region is performing better than other parts of the world with no negative effects on competition.

Slides 10 and 11

Mr. Murphy and Mr. Bennett concluded—

- The airline industry is more competitive than at any time since 1995.
- Deregulation has fostered competition.
- Network air carriers are under significant cost and competitive pressures, and the situation is not temporary because low-cost air carriers continue to expand and set prices.
- Low-cost air carrier cost convergence is not occurring.
- The competitive struggle in the industry is between the two business models.
- Future domestic competitiveness will hinge on network air carriers developing international networks with antitrust immunity.
- Alliances have benefitted consumers, airlines, and airline employees, and have bolstered domestic competition and service to small communities. Mr. Murphy explained alliances bolster network air carrier service to 300 small communities because alliances support network air carriers.

Mr. Tilton then turned the meeting over to Mr. Graham Atkinson and Mr. Kevin Knight for a presentation entitled "Domestic and Global Airline Competition—Current State of Play and Challenges Looking Forward."

Mr. Atkinson's and Mr. Knight's Presentation

Mr. Atkinson began the presentation by stating Mr. Knight is United's Senior Vice President for Network Planning and Revenue Management. Mr. Atkinson stated he is United's Executive Vice President responsible for loyalty business, and was the President of Star Alliance.

Slide 2

Mr. Atkinson explained the focus of their presentation would be an international perspective of the issues. He presented a population weighted map of the world with 2010 real GDP growth rates, illustrating that much of the economic growth is occurring outside the United States.

Slide 3

Mr. Atkinson presented a map of the world depicting the areas covered by OpenSkies agreements, restrictive agreements, and no agreements. He stated the DOT has done a remarkable job negotiating almost 100 OpenSkies agreements, which have benefitted the U.S. aviation industry. He noted the areas of the world with the largest population centers and the highest economic growth rates are also the areas with the most restrictive agreements or no OpenSkies agreements with the United States. This presents a problem for all U.S. air carriers, but particularly the network air carriers, in terms of competitiveness and growth opportunities.

Slide 4

Mr. Atkinson pointed out the United States has been losing its leadership position in aviation over the last 20 years. Ten years ago, the four largest air carriers worldwide in terms of revenue were U.S. air carriers, but currently the two largest air carriers in the world are European. He stated this has occurred through organic growth and noted the European air carriers have not been affected by the hypercompetitive U.S. markets. Equally important is those air carriers have participated in cross-border mergers and other acquisitions. For example, he noted the Lufthansa Group owns other European airlines, and Air France and KLM have merged. Mr. Atkinson stated the Asian air carriers also are merging, and he expects China to appear on the list of the 10 largest air carriers in the future. He concluded international operators are clearly challenging U.S. network air carriers.

Slide 5

Mr. Atkinson described the operations of Emirates Airline (Emirates). He explained, since 2000, Emirates has grown from serving 57 markets to over 100 markets. Emirates has 143 widebody aircraft typically used in international operations, in comparison to United's 96. In 10 years, Emirates has grown to one and one half times the size of United in terms of these aircraft. He noted Emirates has 200 more widebody aircraft on order, in comparison to United's 50. Mr. Atkinson stated Emirates was built on the sovereign strategy of Dubai to take advantage of growing markets in Asia. He noted the Emirates' model is being replicated by Doha in Qatar and Etihad in Abu Dhab, and poses a serious threat to U.S. air carriers.

Slide 6

Mr. Atkinson explained, in response to restrictive barriers in regulated markets, alliances have emerged to help U.S. air carriers effectively compete. He then turned the presentation over to Mr. Knight, who reiterated a global network is key to the success of U.S. air carriers. He stated it is not possible for a single airline to provide its customer base with service to all global destinations; alliances are key to developing new revenue streams and providing customers with access to new markets.

Slide 7

Mr. Knight stated alliances have allowed airlines to link network air carriers and provide service across the globe. He explained this has resulted in new revenue streams, which strengthens air carrier profitability and promotes growth. As an example, he noted, through its Star Alliance with Lufthansa, United has expanded service from two to nine daily flights into Germany, and has increased profits.

Slide 8

Regarding the degrees of integration, Mr. Knight discussed the differences between interline agreements, code-share agreements, and joint ventures. He explained alliances began as interline agreements, that is, commercial agreements between air carriers to allow an air carrier to book passengers on another air carrier's flight and provide for the handling of baggage between air carriers. Interline agreements evolved into current code-share agreements, which provided for seamless connectivity and allowed reciprocal frequent flier cooperation. Mr. Knight further explained air carriers are now entering into deeper commercial relationships through joint ventures where air carriers share revenue and, in some cases, profits. OpenSkies agreements and antitrust immunity are critical to the success of joint ventures.

Slide 9

Mr. Knight noted the marketplace has had a dramatic effect on partnerships and alliances, and provided a table illustrating changes in current alliances. As an example, he pointed out Continental Airlines' decision to move from the Skyteam Alliance to the Star Alliance as a result of the Delta Airlines and Northwest Airlines merger. He provided further examples of air carriers moving between alliances and noted shifts between alliances have a direct impact on the other participants in the alliance. To illustrate this point, he stated when Japan Airlines (JAL) entered a restructuring and needed capital, Delta saw an opportunity to solidify its position in the Asian market; Delta offered over $1 billion in investment, which then triggered a response from American Airlines (which already had a partnership with JAL).

Slide 10

Mr. Knight reiterated the highest growth rates are occurring outside the United States, and U.S. air carriers need to be able to participate in those markets that often have restrictions. He further noted U.S. air carriers have lost their leadership position to foreign air carriers, and emerging airlines are changing the competitive landscape. Mr. Knight emphasized that development of alliances is critical, and cross-border investments and mergers will continue to impact alliances.

Slide 11

Mr. Knight offered suggestions to address the current situation:

- Establish access to the most important international growth markets. To achieve this, it is necessary to (1) reaffirm policy to support open skies, (2) negotiate additional OpenSkies agreements with priority on those markets with the greatest potential, and (3) support the removal of trade barriers.

- Enable effective cross-border alliances by facilitating (1) immunized commercial relationships, (2) deeper commercial relationships as proposed by the parties, and (3) access to needed infrastructure such as slots and gates.

Mr. Tilton then turned the meeting over to Mr. Robert Lekites, UPS.

Mr. Lekites stated access to emerging markets is as critical to the cargo airlines as it is to passenger airlines. He noted U.S. cargo airlines are among the world's largest airlines in terms of operations, employees, and impact on the U.S. economy, and, therefore, should be a DOT priority. He emphasized cargo airlines need unfettered access to global markets, which requires obtaining OpenSkies agreements and enforcing those agreements. He acknowledged DOT and the U.S. Department of State have been successful in opening foreign markets and obtaining over 100 OpenSkies agreements, and these efforts have had a major positive impact on the U.S. and global economies.

Mr. Lekites suggested the DOT and the U.S. Department of State focus on a few fast growing markets, specifically, China, Hong Kong, Mexico, and Brazil. In addition, he stated practical access is also necessary and obstacles remain, such as local airport restrictions, restrictions on competitive ground handling, nontransparent slot constraints, custom facilities problems, restrictive environmental measures, and nighttime curfews. He noted the international market is UPS's growth area: 10 years ago approximately 12 percent of UPS block hours were international; today, that figure is 50 percent, primarily from access to China. Without OpenSkies agreements, UPS would primarily be a domestic air carrier. He concluded by complimenting Mr. Atkinson and Mr. Knight on their presentation.

Mr. Tilton invited the committee to ask questions of the panelists.

Committee Discussion

Ms. Friend asked what the FAAC could recommend to change the situation sufficiently so the industry could become profitable. In response, Mr. Murphy encouraged the committee to defend deregulation and support the continued development of alliances and resist efforts to limit them. He noted alliances are the future of U.S. airlines. In addition, he encouraged the committee to support open international markets, especially regarding China (which continues to restrict U.S. airlines), and to urge a fair tax policy in the United States and abroad. He pointed out the U.S. airline industry has been one of the least profitable industries for the last decade and believes these steps would strengthen the industry.

Mr. Regalado pointed out if the FAAC's recommendations are accepted, other Governments will have to reach agreement with the United States. He asked, to what extent would this process be hindered by NextGen equipment requirements? Mr. Knight responded NextGen would not be a considerable barrier because NextGen will be equally important to the international community. Mr. Tilton noted there is significant coordination between the United States and other nations on NextGen, and it is understood the investments worldwide must be as seamless as possible. Mr. McKenzie pointed out foreign air carriers are more profitable and, therefore, it is easier for them to make the investment in NextGen.

Dr. Borenstein clarified the presenters were not approved by the Subcommittee on Competitiveness and Viability, and the subcommittee was not aware of the presentation content. He asserted this raises an issue as to the subcommittee's credibility. In his opinion, the presentation was not neutral and effectively presents United's view of the world. He noted the presentation used 40 minutes of the subcommittee's allotted 1 hour. Dr. Borenstein stated two journalists asked him how a Subcommittee on Competitiveness and Viability chaired by the CEO of a legacy air carrier could be credible. He commented that having presentations financed by United is not the way to reach consensus or to have a real, open debate. When Mr. Knight expressed concern that he would not have the time to refute all of the issues, Mr. Tilton offered him as much time as needed. Dr. Borenstein commented Ms. Kurland needed to maintain a schedule; however, Ms. Kurland stated she could take some time from the breaks.

Dr. Borenstein stated he has worked in the airline industry for more than 30 years, advised DOT and the U.S. Department of Justice on airline policy, studied competition extensively, and written the first study empirically identifying the hub dominance effect. He noted, although he may agree with many of the presenters' facts, he does not agree with their conclusions. In rebuttal to the presentation, Dr. Borenstein made the following points:

- It is true that low-cost air carriers are gaining market share and expanding. However, the report states 80 percent of network air carrier routes are competing with low-cost air carriers; this rate is based on the assumption that competition is metropolitan area by metropolitan area and not airport by airport, for example, Baltimore-Washington Thurgood Marshall International Airport is equivalent to Ronald Reagan Washington National Airport. He noted the figure would be closer to 28 percent if the calculations were done on an airport-by-airport basis.

- Hub premiums have not disappeared, although they have declined since the mid 1990s. Dr. Borenstein stated there is clear evidence of dominance and market power in a number of airports; when looking at pricing, it is difficult to accept the claim that the market is hypercompetitive. On some routes, fares are three to four times higher than comparable length service routes. He stated airlines exercise market power when they have the opportunity.

- Air fares are down substantially since deregulation, but load factors have increased substantially. Dr. Borenstein stated if airfare declines are adjusted for load factors, more than two thirds of the real decline in air fares is the result of air carriers increasing the number of passengers on every flight.

- Low-cost air carriers are entering more routes. Dr. Borenstein stated these are air carriers that have 30 to 40 percent lower costs on identical service routes. He noted when two air carriers have costs that differ by 30 percent, the higher cost air carrier either controls its costs or goes out of business. He suggested the most serious challenge to network air carriers is their high costs. Dr. Borenstein added if barriers to entry (for example, frequent flyer plans, uncompetitive uses of corporate marketing agreements, and blocking of entry to gates and slots) did not exist, there would be more rapid expansion. He stated while he is heartened that low-cost air carriers are expanding, he questions why it took so long. He suggests the cost differentials became so extreme that the low-cost air carriers were finally able to enter these markets.

- The network air carriers are not serving small towns and cities, rather their commuter air carriers are serving those areas. Dr. Borenstein noted the relationship between the commuter air carrier and the network air carrier does not always involve ownership. He suggested these relationships could be with low-cost air carriers.

- The problem with the aviation industry is the lack of competition. Dr. Borenstein stated barriers to entry are preventing low-cost air carriers from expanding. He suggested such expansion would either drive the legacy air carriers out of business or force them to lower their costs.

- There should be a level playing field in the international markets. Dr. Borenstein stated U.S. air carriers should not receive special treatment but be treated fairly. He questioned the position that the United States should have the largest presence in every industry.

Mr. Conley asked Mr. Murphy if the suggestions he offered in response to Ms. Friend's earlier question would result in the erosion or outsourcing of U.S. jobs. Mr. Murphy responded he did not believe his suggestions would have any effect on an air carrier's decision to outsource. Mr. Conley asked about the effect of alliances in particular. Mr. Murphy stated he does not interpret alliances as the outsourcing of jobs but rather the cooperation among airlines to reach new markets.

Mr. Tilton offered the presenters an opportunity to respond to Dr. Borenstein's comments. Mr. Murphy stated they agree fundamentally on many issues. Regarding service to small communities, Mr. Murphy noted low-cost air carriers serve 38 small communities in the United States and the network air carriers serve 334 small communities through feeder carriers. He disagreed that if the network air carriers stopped serving those communities, the low-cost air carriers would serve them. He questioned whether the high-cost feeder air carriers could work with the low-cost air carriers and whether the low-cost air carriers would be interested in connecting traffic. As to barriers to entry, Mr. Murphy noted there are only two slotted airports in the United States that present questions; beyond that, the expansion of low-cost air carriers suggests they are able to overcome those barriers.

Mr. Bennett stated air fares, adjusted for inflation, are lower now than in 1995, which suggests a competitive industry. In addition, the number of markets with multiple competitors has increased. He noted it is strange it took so long (given the low-cost air carriers' cost advantages), but economics prevailed. Mr. Bennett added providing network air carriers with access to international markets may help them to repair. He stated the low-cost air carriers will eventually enter the international markets, which will be competition for the network air carriers. Dr. Borenstein questioned the wisdom of propping up the high-cost air carriers by providing them access to other markets. Mr. Bennett responded he was not suggesting "propping up" those air carriers. He stated the network carrier model is the correct model for the international market, and the vast majority of the international market will not be served by the low-cost air carriers.

Mr. McKenzie stated the capital markets have subsidized low airfares and these airfares are not sustainable. He further noted when a carrier adds complexity, such as different fleet types, costs increase exponentially. As an example, he related when JetBlue added a second fleet type, their costs increased dramatically. Mr. McKenzie recognized alliance maturity has been the result of competition overseas, but asked whether it was also the result of consumer needs. Mr. Atkinson agreed meeting client needs is fundamental to the growth of alliances.

Regarding alliances and joint ventures, Ms. McAhron-Schulz expressed air carrier labor groups' concern that if there is a sharing in the profits, the work performed also should be shared. She expressed concerns China has no labor laws and many of the foreign air carriers, especially those in China and the Middle East, are subsidized by their Governments. Mr. Bennett responded, as the air carriers developed more integrated alliances, the large growth in the transatlantic market accelerated. He noted between 2003 and 2008, large network air carrier traffic grew by 50 percent, which represents many jobs. He suggested, absent alliances, there would not have been this growth, and domestic air carriers would have experienced a net loss of jobs.

Mr. McGee referred to Dr. Borenstein's concerns and stated there will need to be sensitivity to the concerns of individual committee members, given the committee is such a diverse group where some voices are stronger than others. He then asked whether the lack of cost convergence is the result of labor costs or other factors, such as the hub-and-spoke network. Mr. Bennett responded he and Mr. Murphy have not extensively studied cost structure, but the lack of cost convergence is not solely the result of labor costs. He stated when the operating costs of low-cost air carriers and network air carriers are compared, the differences are across the board. Mr. McGee also expressed concern about a lack of transparency for consumers regarding a range of issues, including code-sharing, alliances, and safety differences.

Mr. Tilton commented it is unfortunate Mr. Bedford could not attend today. He noted Mr. Bedford is CEO of Republic Airways, which has a hybrid business model involving both a low-cost air carrier and a regional air carrier. Mr. Tilton noted Mr. Bedford is a member of the Subcommittee on Competitiveness and Viability and also chairs one of the subcommittee's working groups.

Mr. Barger commented he represents a low-cost air carrier and, as a member of the subcommittee, he was fine with viewing the presentation for the first time today. He noted this is part of a fast-moving committee and subcommittee process. Mr. Barger stated he found the presentations helpful and noted JetBlue flies to South America and looks at the world through the "alliance lens."

Ms. Baer agreed alliances are the future and encouraged the airline industry to work more closely with airports. She pointed out when an air carrier obtains the rights to fly to a new destination, there are issues about the use of airport property. Ms. Baer asked whether the panel had considered airports that have little or no additional access for air carriers. Mr. Bennett responded their study took a macro view of the issues, but agreed Ms. Baer raised an important point.

Mr. Tilton concluded by noting the lively debate is captured by the Subcommittee on Competitiveness and Viability's three subject areas. He stated this is the largest and most democratic subcommittee. Mr. Tilton noted the subcommittee's working group chairs include Mr. Bedford, who represents a low-cost and regional air carrier, and Mr. McGee, who represents the consumer.

Ms. Kurland thanked the subcommittee and its panelists. After a 10-minute break, she turned the meeting over to Dr. Alonso, acting as chair of the Environment Subcommittee for Mr. Bedford.

Environment

Dr. Alonso explained the Environment Subcommittee is charged with understanding the issues and barriers the aviation industry faces regarding sustainable growth and the environment. He identified the other members of the subcommittee as follows: Mr. Bedford, subcommittee chair; Ms. Egnotovich; Ms. Piasecki; and Mr. Regalado.

Dr. Alonso noted the environment is one of the major constraints for the sustainable growth of the aviation industry. This is highlighted more frequently because of the confluence of the effects of CO_2 on the environment and the use of fuel. He stated the subcommittee's discussions have focused on CO_2 and the global climate impacts of aviation, and three main issues have emerged:

- Aircraft technologies which historically have accounted for the majority of the environmental impact reductions of the commercial aviation system,
- Aircraft operations and traffic management, and
- Alternative fuel use in the commercial aviation market.

Dr. Alonso stated the subcommittee has also discussed issues such as gains from runway metering, minimizing the impact of ground service equipment, reinstatement of research and development tax credits that are expiring, and international harmonization and equipage.

Dr. Alonso introduced Ms. Jeanne Yu, Director, Environmental Performance Product Development at Boeing. Her presentation was entitled "Environmental Benefits from Operations and Aircraft/Engine Technologies."

Ms. Yu's Presentation

Slide 2

Ms. Yu stated there are global environmental challenges, and the aviation industry is expected to be a technology leader in meeting those challenges. She noted innovative technologies will set the United States apart from the world from a competitive standpoint.

Slide 3

Ms. Yu explained aviation CO_2 is relatively small and must remain so. In 2008, global manufacturers signed a declaration for action on climate change with a commitment to carbon-neutral growth and a goal of a carbon-free future. She noted companies will work together to achieve this goal, but Government also has a role in providing the opportunity for technology development.

Slide 4

Ms. Yu reviewed the progress made over the last 5 decades: a 70 percent improvement in fuel efficiency and reduced CO_2, and a 90 percent reduction in noise footprint. She stated new technologies will be needed to achieve the next level of improvements.

Slide 5

Ms. Yu noted the subcommittee is addressing CO_2 as a priority. She explained from a product standpoint, there are three categories to consider:

- Environmentally progressive products and services;
- Operational efficiency, that is, ensuring products are operating as efficiently as possible; and
- Renewable fuel and energy solutions.

Slide 6

Ms. Yu presented the development of biofuels as an example of connecting people to accelerate technology. She stated the initial discussions on biofuels began with a group of about 20 people from around the world gathered at Seattle-Tacoma International Airport. They initially thought it would take 20 to 50 years to fly an aircraft on biofuels. However, as the dialogue progressed, it became apparent this could be achieved in a shorter timeframe; and a goal of 2 to 3 years was set. She explained partnerships were formed with airlines, engine manufacturers, and global certification agencies to achieve this goal.

Slides 7 and 8

Ms. Yu discussed the following areas of opportunities from a product standpoint for reducing fuel consumption, emissions, and noise:

- Airplane modifications. As examples, she offered airplane winglet retrofits as a way to improve fuel efficiency by 3 to 5 percent; and carbon brakes for the B–737 that are 500 pounds lighter and, therefore, increase fuel efficiency.
- Operational efficiency. Ms. Yu stated aircraft must be operated to maximize fuel performance. She noted Boeing assists operators with flight planning and also has an "Aircraft Health Management" tool that identifies aircraft engine performance.
- Airspace efficiency. Ms. Yu related a recent RNP demonstration as an example of the way NextGen will improve airspace efficiency.

Slides 9 through 11

Regarding environmentally progressive products and services, Ms. Yu stated CO_2 presents the biggest opportunity to address climate change concerns, and noted CO_2 is aligned with fuel efficiency. She reviewed fuel efficiency improvements for new airplanes in service. She noted the largest gains are achieved by incorporating new technologies into larger changed products such as the B–787 and the B–747–8; this effort would increase fuel efficiency by 20 percent and 16 percent, respectively. Ms. Yu stated the 20 percent improvement in fuel efficiency of the B–787 is based on a suite of solutions.

Slide 12

Ms. Yu stated CO_2 and fuel efficiency improvements involve research in the following four areas:

- Next generation materials. She noted creating lighter weight materials, such as composites, that are equally or more structurally efficient, reduces the weight of the overall aircraft and increases its fuel efficiency.

- Aerodynamic design improvements. As an example, Ms. Yu pointed to the raked wing tip on the B–777, which reduces drag and improves fuel efficiency.

- Propulsion systems improvements. Ms. Yu explained integrating new, more efficient designs, such as open rotors, results in efficiencies.

- Less energy-intensive electric systems. She noted more efficient power distribution results in less engine power draw and therefore less fuel consumption.

Slide 13

Ms. Yu discussed the evolution of aircraft composite technology development. This began in the 1970s with carbon epoxy when Boeing worked with NASA to develop the first demonstration parts to be flown on B–737s. She referred to a pie chart illustrating the increasing use of composites, which has increased aircraft performance. She noted composites comprise approximately 50 percent of the B-787.

Slide 14

Ms. Yu stated technology also includes the creation of state-of-the-art modeling computational tools and processes that allow more rapid development of new configurations.

Slide 15

Ms. Yu explained technology maturity is measured on NASA's Technology Readiness Level (TRL) scale. She stated technologies are deemed technology-ready when they reach TRL 6. TRL 6 technologies are considered for new products approximately 3 to 6 years before airplane entry into service. She noted it may take up to 10 years for major technologies to reach TRL 6, and the issue is how to shorten this timeline.

Slide 16

Ms. Yu stated demonstrators have been used in quiet technologies. As an example, she cited noise reducing chevrons developed during the Quiet Technology Demonstrator Program.

Slides 17 and 18

Ms. Yu spoke about the need to broaden the use of demonstrators and accelerate environment technology. She stated Boeing has a model for an ecoDemonstrator, which will provide a platform for achieving that goal. Ms. Yu explained Boeing introduced the ecoDemonstrator program concurrent with winning $25 million in cost sharing through the FAA CLEEN contract. This money will fund the first two flight tests, which are scheduled for 2012–2013. The flights will involve the first key technologies: (1) adaptive trailing edge, which helps in the reconfiguration of the wing during flight; and (2) ceramic composites, which allow higher temperature engine efficiency. In addition, Boeing is working with NASA on a future demonstrator for major changes.

Slide 19

In summary, Ms. Yu discussed the requirement for successful breakthrough innovation. She stated there must be focus and commitment. Regarding the issue of focus, she suggested there needs to be an aviation industry construct around a technology innovation portfolio, and the focus must be on the short and long term. From a commitment standpoint, she noted interruptions in technology development are detrimental, and sustained long-term research investment and appropriate incentives are necessary.

Dr. Alonso thanked Ms. Yu and introduced Mr. John Heimlich, ATA chief economist, for a presentation entitled "Commercial Aviation: The Quest for Sustainable and Affordable Alternative Jet Fuel."

Mr. Heimlich's Presentation

Slide 2

Mr. Heimlich stated there are environmental and economic motivations to pursue alternative energy for aviation. He noted aviation business decisions are based on long-term fuel costs. He further noted from 1991 through 2000, the average spot price for jet fuel was $0.59 per gallon. At that time, the U.S. Energy Information Administration forecasts for 2010 and 2011 were $2.19 per gallon and $2.34 per gallon, respectively. Mr. Heimlich indicated important considerations for the industry are the expected trajectory of prices in terms of level and volatility.

Slide 3

Mr. Heimlich explained the industry competes with other petroleum users for supply. As more gasoline and diesel is derived from nonpetroleum sources, the margins of petroleum refiners will decrease. As a result, petroleum refiners will have an economic incentive to reduce refinery use, which will result in less jet fuel output and upward pressure on prices. He illustrated the types of fuel produced from one barrel of petroleum, and noted approximately 10 percent results in jet fuel while approximately 50 percent results in gasoline. He stated the properties and characteristics of refining make it impossible for refiners to produce 100 percent jet or diesel fuel from a barrel of petroleum. Mr. Heimlich suggested alternative fuel development represents an opportunity to reduce dependence on events in the other petroleum segments.

Slide 4

Mr. Heimlich pointed out $0.01 per gallon represents $175 million to $200 million in annual costs for the industry. Further, a petroleum-dependent aviation industry is susceptible to price shocks, supply disruptions, and carbon constraints. He noted alternative fuels also can reduce emissions.
Mr. Heimlich explained the industry is committed to "drop-in fuels," which do not require changes to airplanes, airports, or pipeline infrastructure. These fuels also can be comingled with different fuel blends. He stated U.S. transportation, agriculture, and energy policies are key enablers of this process.

Slide 5

Mr. Heimlich described the CO_2 life cycle for fuel, which begins with the generation of feedstock, requires transportation and processing, and ends with combustion in the aircraft. He noted alternative fuel provides benefits such as the sequestration of carbon in a loop; reduction or sequestration of carbon during transportation and/or processing; and decreases in CO_2 yield upon combustion in some cases.

Slide 6

Mr. Heimlich described the Commercial Aviation Alternative Fuels Initiative (CAAFI) and the groups collaborating in this process. He noted the passage of the first new specification for synthetic fuels last year, and the future passage of the specification for hydrotreated renewable jet (HRJ) fuel through CAAFI. Mr. Heimlich pointed out CAAFI is working at the international, national, and state and local levels.

Slide 7

Mr. Heimlich stated ATA and the Defense Logistics Agency (DLA) formed a strategic alliance for alternative fuels in March 2010. The purpose of the alliance is to explore cooperative market engagement for fuels; harmonize contractual terms; and jointly advertise requirements to supply competitively priced, environmentally preferred, and operationally secure jet fuel in different parts of the country. He emphasized a constraint on their efforts is the U.S. Department of Defense's (DOD) 5-year contracting authority limitation. DOD is seeking to extend this to 20 years to better match investment horizons. He noted DLA and the U.S. Pacific Joint Command are partnering with ATA, Boeing, FAA, and the U.S. Department of Agriculture in the "Farm to Fly" initiative regarding the upcoming farm bill, with the view that it is a farm and energy bill.

Slide 8

Mr. Heimlich explained off-take agreements have been key to progress in the development of alternative fuels and provided a list of recent memorandums of understanding in this area.

Slides 9 and 10

In conclusion, Mr. Heimlich outlined the following challenges to commercial deployment of alternative fuels:

- Price stability and affordability. He noted most of the suppliers are seeking minimum price guarantees above the market price, and neither the airlines nor DOD is currently able to exceed that price. He emphasized the importance of transitioning these suppliers to market price competitiveness, which may take Government involvement.

- Certification. In addition to HRJ, Mr. Heimlich stated there will be other pathways (for example, lignocellulosic bioconversion), with different solutions depending on where the crops are grown, the local strengths, and the type of equipment available. He noted other pathways may yield larger volumes of environmentally beneficial fuel.

- Feedstock readiness. Mr. Heimlich stated the industry is conscious of the "fuel versus food" issue and that sustainability requires large quantities that do not compete with food stocks.

- Crediting of environmental benefit. Mr. Heimlich explained fuel is typically comingled in common carrier multiproduct pipelines and storage facilities, and an airline may not receive the exact fuel it purchased. He emphasized it is important a purchaser receive credit for purchasing environmentally beneficial fuel regardless of what that purchaser actually receives.

- Compatibility of international and domestic acceptance criteria. He emphasized the importance of compatible environmental criteria worldwide and within the United States.

Dr. Alonso thanked Mr. Heimlich. He asked the committee for any comments on the subcommittee's suggested issue areas. He noted the subcommittee has postponed until its next meeting consideration of the goals being established for environmental performance by the aviation system and whether the goals are achievable.

Mr. McKenzie asked what the price of crude oil needs to be for biofuels to be economically viable; whether all the fuels discussed are "drop-in fuels"(that is, compatible with existing aircraft engines and fuel systems), and what incentives are needed. Mr. Heimlich responded for the next generation, only "drop-in fuels" will be manufactured and used. He also noted it would not be economical or feasible to reengineer aircraft and engines or to have segregated storage facilities.

Regarding the price of crude oil, Mr. Heimlich stated there may be some companies that can produce alternative fuels at a cost comparable to crude oil prices of $50 to $60 per barrel. He further noted there is a correlation between fuels that yield greater environmental benefit and higher prices. In addition, he stated it is irrelevant whether the incentives are for the supplier or purchaser, as long as a competitive market price is reached. He explained the "credit crunch," the ethanol bust, and the volatility of crude oil prices have all inhibited investors, so public sector involvement is needed.
Mr. McKenzie asked what it would take to stimulate widespread manufacture of biofuels.
Mr. Heimlich noted a large number of companies will be needed.

Mr. Regalado expressed hope the aviation industry can avoid the criticisms directed at alternative fuels for automobiles. He noted aviation alternate fuels must have no more environmental impacts than the current fuel. Mr. Heimlich responded this is why groups are looking at what sustainability and a true life cycle analysis mean. He noted there are different regional solutions, such as turning waste into fuel in the northeast part of the country, and innovation must be encouraged. Ms. Yu emphasized the need to define sustainability criteria so there is not competition with food or land and water resources.

Dr. Borenstein stated individuals involved in research do not view alternative fuels as a viable alternative to $80 to $120 per barrel for crude oil. He noted if there are huge technological breakthroughs, they could easily beat $80 per barrel, but at this point there is no serious talk about any scale of production. Dr. Borenstein identified two fundamental problems: (1) the need for major technological breakthroughs, particularly with the nonagricultural alternatives such as algae; and (2) if alternative fuels are ever produced on a large scale, the price of fuel will collapse. He suggested focusing on distant technologies that are long shots rather than technologies that are not scalable and will never be cheap enough. He emphasized there is no point in solving climate change in only the United States, and consideration must be given to the entire global market.

Mr. McGee stated operational issues are a part of addressing environmental concerns. He pointed out in the last 10 years, the airline industry has significantly changed. He noted more than 50 percent of domestic flights are operated by regional carriers with more aircraft carrying fewer passengers. He asked whether the subcommittee has considered such operational issues and disincentives to such behavior. Dr. Alonso responded the subcommittee is considering NextGen and whether technological improvements can lead to an environmentally sustainable commercial aviation system with such growth and changes in operations.

Mr. Tilton noted it is difficult to look to an industry that cannot earn a return on capital for solutions on these issues. He stated the contradiction of an economically distressed industry and an environmentally important industry must be discussed because the question of who will pay is fundamental.

Dr. Alonso stated the subcommittee will hold a teleconference September 20, 2010, that will be open to the public, and he encouraged the participation of the members of other subcommittees. He noted the subcommittee also will hold a meeting October 5, 2010.

Before turning the meeting over to Ms. Friend, chair of the Labor World-class Workforce Subcommittee, Ms. Kurland reviewed the tasks assigned to the subcommittee: examining the avenues for retaining aviation industry employees, and recruiting a world-class workforce for the aviation industry. She also noted, although the FAAC meeting was scheduled to conclude at 4:30 p.m., it would continue until 5:00 p.m. in light of the dynamic discussions.

Labor and World-class Workforce

Ms. Friend introduced the members of the Labor and World-class Workforce Subcommittee: Mr. Barger, Mr. Conley, Mr. Lekites, Ms. McAhron-Schulz, Ms. Egnotovich, and Ms. Bowens. She stated, with regard to the subcommittee's task of recruiting a world-class workforce, the subcommittee agreed there is a projected shortage of U.S. workers in the areas of science, engineering, and math. She noted the task is to increase access to these fields of education. Ms. Kurland introduced Ms. Jennifer McNelly, Senior Vice President, The Manufacturing Institute (Institute). She noted Ms. McNelly supports the Institute's efforts to launch and implement a strategic national agenda on education reform and workforce development on behalf of U.S. manufacturers.

Ms. McNelly's Presentation

Ms. McNelly stated the Institute is a nonprofit, nonpartisan affiliate of the National Association of Manufactures (NAM) and provided an overview of the Institute's members. She explained the Institute focuses on U.S. manufacturing competitiveness, including education reform and workforce development.

Ms. McNelly identified two key drivers to the success of U.S. manufacturers: innovation and a highly educated workforce. U.S. manufacturers believe a skilled and educated workforce is the single most critical element of innovation and the hardest asset to acquire. She stated U.S. manufacturers rank the difficulty in finding qualified talent (that is, skilled workers at the engineering level and basic technician level) as a top challenge. Ms. McNelly stated U.S. dominance in the aviation industry and manufacturing is threatened by the lack of such a workforce. She noted technology advances require more advanced skills, but the U.S. education system has deficits.

Slide 2

Ms. McNelly pointed out studies since 1983 have documented problems in the U.S. education system.

Slide 3

Ms. McNelly stated she would offer a framework for action to revitalize the U.S. workforce based on building a technical, science technology, engineering, and math workforce. She noted the United States has focused its efforts on science, technology, engineering, and math (STEM) in grades K through 12 and higher education. However, the United States has failed to act on the "missing middle"—the applied STEM pathway from high school to post-secondary education. She stated overcoming this challenge requires a systems approach. According to Ms. McNelly, there is a disparity between what employers need and what schools are producing, and the traditional industry answer to a supply problem is to find a new supplier or push the problem down chain. Ms. McNelly stated there is a need to partner with suppliers, build new alliances, and find the key chokeholds and processes that introduce variability and defects in the supply chain of human capital. Although the problem is national in scale, the solutions must be at the local level.

Slide 4

Ms. McNelly suggested the challenge is how to develop the pathways for young people that offer mobility and allow them to follow their passions. In addition, it is important to recognize transitioning workers have transferable skills and to accelerate their path into new employment opportunities. She explained this entails career ladders and "latticing" that recognize the skills mobility needed in the workforce. Ms. McNelly stated on March 4, 2009, the Institute launched the NAM endorsed Manufacturing Skills Certification System. This system will assist the United States in producing the high-performance workforce critical to the U.S. economy through competency-based, customized education and job training.

Slides 5 and 6

Ms. McNelly explained the evolution of this skills certification system began with the Advanced Manufacturing Competency Model. She stated the initial focus was on the following four core skill areas needed for entry-level work:

- Personal effectiveness. Will the individual arrive at work on time and be ready to work?
- Basic academic requirements. Is the individual able to read a manual, do basic math, and retain training developed by industry?
- General workplace competencies. Is the individual able to work in a team?
- Industry technical competencies.

She noted the first three skills are needed in every sector of the economy. In addition, for the manufacturing economy, entry-level workers should understand fundamental principles of manufacturing, competency issues critical to U.S. competitiveness, lean manufacturing, operational excellence, and continuance improvement. She explained workers should be able to "lattice" among fields.

Slide 7

Ms. McNelly stated the manufacturing industry has endorsed certifications that met four key threshold criteria: (1) nationally portable, (2) driven by industry, (3) aligned to the competency model, and (4) third-party validated. She explained this collaborative effort has resulted in an organization of certification programs with stackable credentials that can be awarded in secondary and post-secondary education. She noted these are valuable, specific credentials with real value in the workplace.

Slide 8

Ms. McNelly suggested the skills certification system and the career pathways it supports also align to secondary and post-secondary education. She stated integrating skills certification into career pathways implies they should become part of degree programs so a worker can progressively pursue stackable credentials. Ms. McNelly noted the multi-tiered deployment strategy for these certifications and credentials is primarily through the U.S. community college system.

Slide 9

Ms. McNelly explained the United States must compete in productivity improvement, innovation, and workforce flexibility. She stated the Institute is working aggressively to design and release an expanded version of this system to support specific sector demands. She noted the Institute does not tell education how to teach but rather communicates the expectations of success.

Slide 10

Ms. McNelly stated the skills certification system will (1) make high quality jobs more attainable, (2) lower the dropout rate, (3) increase the number of students who are ready for work upon completion of their education, and (4) provide validation to employers that an individual has the necessary skills. In summary, Ms. McNelly offered the following areas for consideration:

- National leadership. Ms, McNelly stated there must be a recognition that manufacturing and aviation is important to U.S. economic security, and that STEM is critical to national competitiveness.

- Addressing the "missing middle."

- Reinvigorating the Interagency Aerospace Revitalization Task Force.

Committee Discussion

Ms. Bowens noted education is a local issue and suggested the committee consider how to integrate its efforts with local agencies and businesses that need the same skill sets needed by the aviation industry. In response, Ms. McNelly recognized this as the greatest challenge. She stated the Institute is activating the certification architecture in 23 States. She noted part of the reason the Institute has been successful is that its system allows local educational solutions based on regional needs. However, she emphasized there needs to be a common framework.

Mr. Tilton stated this is a national issue for all industries; the committee needs to be aware there is a competition for talent, and successful industries win. He emphasized the aviation industry's need to be an attractive employer, and stated this requires a bright future for the industry. Mr. Barger asked if there is an ongoing dialogue with the U.S. Department of Education about STEM literacy. Ms. McNelly responded there is some dialogue. However, she stated the United States has not prioritized the concept that applying what you learn is as important as learning the theories.

Ms. Friend stated the subcommittee recognizes there is a future critical labor shortage and it has a series of suggestions the subcommittee hopes will make STEM education a priority. She pointed out the need to formulate those proposals into actionable items. Ms. Friend also noted airport operators have identified a number of workforce recruitment issues. She added the subcommittee also has discussed promoting a culture of workplace dignity, and one concern is that in unionized workplaces, protracted labor negotiations create an unhealthy atmosphere.

Ms. Friend introduced the next presenters: Mr. Harry Hoglander, Chairman, and Ms. Elizabeth Dougherty, Member, the National Mediation Board (NMB). She noted the NMB oversees collective bargaining in the aviation industry.

Mr. Hoglander's and Ms. Dougherty's Presentation

Mr. Hoglander thanked the committee for the opportunity to speak and pointed out the NMB has the statutory authority to promote a harmonious relationship between the aviation industry and its employees. He stated Ms. Dougherty would begin their presentation entitled "The Role of the NMB in Ensuring Timely Collective Bargaining."

Slide 2

Ms. Dougherty provided an overview of the NMB, which operates under the 1926 Railway Labor Act (RLA). She noted the RLA only addresses the railroad and aviation industries, and was enacted by an agreement between labor and management. Ms. Dougherty stated the NMB has three main functions: (1) oversee and conduct union representation elections at railroads and airlines, (2) mediate and oversee negotiations for collective bargaining agreements, and (3) pay for and administer a system for arbitrating grievances in the railroad industry. In conjunction with the last two functions, the NMB offers alternative dispute resolution services.

Slide 3

Ms. Dougherty stated there are three NMB members: Mr. Hoglander; Ms. Linda Puchala, and herself. She noted the board members are presidentially appointed and confirmed by the U.S. Senate, and no more than two board members may be from the same political party.

Slide 4

Ms. Dougherty reviewed the offices within the NMB. She noted the General Counsel office and the Chief of Staff report directly to the NMB.

Slide 5

Ms. Dougherty reviewed the purpose of the RLA, which is to—

- Avoid interruptions to interstate commerce.
- Promote harmonious labor relations.
- Ensure employees are free to organize without carrier interference.
- Provide for the prompt settlement of major and minor disputes.

Slide 6

Ms. Dougherty provided an overview of the RLA. She noted there are many unique aspects of the RLA and NMB framework in comparison to the National Labor Relations Act framework. She explained the RLA and NMB provide for system-wide bargaining units; for example, all flight attendants at an airline must be represented by a single representative. In addition, Ms. Dougherty stated contracts are amendable and do not expire, and the status quo must be maintained when the contracts become amendable. The RLA requires mandatory mediation before parties may use self help; and self help cannot be used until the parties are released by the NMB.

In addition, the RLA provides the NMB with wide discretion in mediating collective bargaining agreements. She pointed out the airline industry opted not to participate in the NMB's program to pay for arbitrating certain grievances. Ms. Dougherty stated the NMB has a 97 percent rate of resolving cases through negotiated agreements, and currently has more than 90 active mediation cases.

Slide 7

Ms. Dougherty explained the RLA bargaining process, which begins with direct negotiations between the parties when or before a collective bargaining agreement becomes amendable. She stated parties sometimes reach agreement at this stage without coming to the NMB; however, if the parties are unable to resolve the issues, they approach the NMB for statutory mediation. She noted an intermediate option is for the parties to ask for NMB alternative dispute resolution services.

Ms. Dougherty explained if the NMB is unable to facilitate a negotiated agreement through mediation, the NMB will offer the parties the option of entering into binding, voluntary arbitration. If either party rejects that offer, the NMB releases the parties, who must wait 30 days before engaging in self help. She pointed out if the NMB determines at the time of release that any section of the United States would be deprived of essential transportation services, the NMB notifies the U.S. President. The President will then determine whether to create a presidential emergency board (PEB). Ms. Dougherty stated if the President creates a PEB, the PEB has 30 days to hold hearings and report to the President. She explained at this point, another 30-day period begins, during which the parties try to reach an agreement. If the parties are unsuccessful at the end of that period, they may engage in self help unless Congress intervenes.

Ms. Dougherty turned the presentation over to Mr. Hoglander.

Slide 8

Mr. Hoglander reviewed the NMB's mediation case inventory and noted the NMB currently has the highest number of cases in the last 30 years. He pointed out many of the airline cases are bankruptcy cases or bankruptcy-induced contracts that have reached their amendable dates. At the time the presentation data was gathered, the NMB had 91 active cases: 54 airline cases and 37 railroad cases. Mr. Hoglander stated there was one short strike in 2010 involving Spirit Airlines. He noted over the last 75 years, 241 PEBs have been created, with less than 50 involving the airline industry. He stated there is a trend away from the creation of PEBs, with the last airline PEB created in 2002.

Slide 9

Mr. Hoglander reviewed NMB mediation initiatives to ensure a timely collective bargaining process which include the following:

- A robust case review process where certain cases are watched more closely, such as those cases where the parties are close to agreement.
- Promotion of grievance mediation to limit bargaining related issues so that minor issues are resolved before the difficult issues are addressed.
- Promotion of electronic tools to speed the bargaining process.
- Promotion of interest-based bargaining.
- Adoption of the Dunlop II recommendations (see discussion of slide 10 below).

Slide 10

Mr. Hoglander stated the Clinton Administration formed a committee, chaired by Mr. John Dunlop, to address certain labor-management relations issues. He explained the committee's report, known as the Dunlop Report, made dramatic recommendations to improve the NMB. This resulted in the transformation of the NMB from a dysfunctional organization to a very sharp, fast-moving organization that works fairly well. He noted since that report was issued, there have been a number of complaints about the slowness of the mediation process. Therefore, another committee, referred to as the Dunlop II Committee, was formed to make further recommendations concerning the NMB.
Mr. Hoglander stated as a result of the Dunlop II Report, the NMB reinstated the Chief of Staff position and instituted a process for mediation scheduling. He stated the NMB also is working on an expedited process to accelerate the mediation process. However, he noted the parties have much to do regarding the speed of a case.

Slide 11

Mr. Hoglander discussed the Interest-based Bargaining Sample Protocol Agreement, which parties sign before beginning the mediation process. He noted when a case appears before the NMB, there is sometimes much animosity among parties, and the NMB must bring the parties together. He reviewed the elements of the protocol, which includes requiring the parties to complete a facilitated course on interest-based bargaining and to agree to general conditions, such as conducting themselves professionally.

Slide 12

Mr. Hoglander addressed technology improvements in the bargaining process. He described the NMB's use of the central desktop, which allows parties to share their thoughts and information during the negotiating process at any time of the day. He indicated this electronic exchange of information results in a faster mediation process. Mr. Hoglander stated the use of the desktop is now voluntary but may become mandatory in the future.

Mr. Hoglander turned the presentation over to Ms. Dougherty.

Slide 13

Ms. Dougherty provided a list of factors influencing the length of the collective bargaining process, which includes the parties' motivation to reach settlement, the labor-management relationship at the beginning of the bargaining process, and the expectations of the parties, which can have a large impact on the ability to ratify an agreement. In addition, Ms. Dougherty explained the parties can accelerate the process by resolving minor issues before the mediation process begins. She noted airline contracts involve hundreds of issues, and resolving some of those issues before mediation would facilitate the process.

Slide 14

Regarding the obstacles to mediation, Ms. Dougherty cited the availability of parties and mediators, and the adequacy of preparation. She also stated the NMB rarely sees the same union/management teams by the end of negotiations, which can slow the mediation process. Finally, she noted national and global events, such as highly volatile fuel prices, can complicate negotiations.

Committee Discussion

Ms. Friend reiterated the subcommittee must offer actionable issue areas and asked whether the availability of mediators was a funding issue. She noted the value of conducting mediations for consecutive days. Ms. Dougherty responded the NMB has recently hired two mediators. She added the Dunlop II Report addressed the issue of mediating on consecutive days. She stated the NMB is interested in maximizing the number of days a case can be worked within a week or month, but noted the NMB must be mindful of the quality of life of its mediators as well as the parties. Mr. Hoglander added he is precluded from speaking about funding but noted industry has hired mediators away from the NMB and it takes time to replace these individuals.

Mr. McKenzie commented labor costs are one of four key profit drivers for the airlines. He asked how NMB views its role in managing the parties' expectations. Mr. Hoglander responded the NMB is biased only in the public's interest and seeks to promote harmonious relationships to avoid the interruption of commerce. He stated expectations must be managed by the parties and not the NMB.

Mr. Lekites offered his observations about the mediation process in the airline industry. He noted from the union perspective, there is a focus, for political reasons, on obtaining release. He stated the airlines' view is that if release is not obtained, something was left on the table. He further stated in his experience, mediators have been more than willing to stretch the week out and work through the weekend. Mr. Lekites emphasized the need to expedite the process.

Ms. Dougherty noted both parties often have the mentality the process will just take a given amount of time. She stated the NMB is trying to change that mentality and find ways to expedite the process. Mr. Tilton commented other industries are evolving with more creative, flexible contracts because of the volatility and uncertainty of the economy. He asked for the panel members' opinions on why this has not been the case with the aviation industry. Ms. Dougherty responded volatility is part of the problem, and cited profit-sharing as an example of flexibility in contracts. She suggested the volatility of the industry makes profit-sharing unattractive to unions. Mr. Tilton noted the issue always returns to the need for an economically viable industry.

Ms. Friend stated the subcommittee will continue to consider, but may not identify, any actionable items. She added the subcommittee will hold a teleconference with a bargaining practitioner, and will have a presentation on leveling the playing field at the next full committee meeting. She also noted the subcommittee has identified certain concerns involving outsourcing and foreign investment issues. Although the subcommittee may not be able to reach consensus on these issues, it will summarize those concerns to be included with the subcommittee's issue areas.

Closing Remarks

Ms. Kurland thanked the committee members and presenters for their hard work and participation. She reminded everyone the next full FAAC meeting will be held on October 20, 2010, in Los Angeles, California, at the FAA Western Pacific Region facilities. She noted the subcommittees will bring alternatives and options for full committee debate.

Ms. Kurland turned the meeting over to Ms. Hamilton.

Adjournment

Ms. Hamilton solicited a motion for adjournment. On motion, duly seconded and approved by the majority of the FAAC members present, the meeting was adjourned.

The meeting adjourned at 5:16 p.m.

I hereby certify that, to the best of my knowledge, the foregoing minutes are accurate and complete.

Approved by:
Pamela Hamilton-Powell, Designated Federal Official

Dated: November 2, 2010