

STATEMENT OF DORENDA BAKER, DIRECTOR OF THE AIRCRAFT CERTIFICATION SERVICE, FEDERAL AVIATION ADMINISTRATION (FAA), BEFORE THE SENATE COMMITTEE ON COMMERCE, SCIENCE & TRANSPORTATION, SUBCOMMITTEE ON AVIATION OPERATIONS, SAFETY, AND SECURITY, ON FAA REAUTHORIZATION: CERTIFICATION AND U.S. AVIATION MANUFACTURING COMPETITIVENESS, APRIL 21, 2015.

Senator Ayotte, Senator Cantwell, Members of the Subcommittee:

Thank you for the opportunity to speak with you today about the Federal Aviation Administration's (FAA) role in the aircraft certification process. As Director of the FAA's Aircraft Certification Service (AIR), I am responsible for overseeing the design, production, and continued operational safety of aircraft, engines, propellers, and articles. Efficiently and effectively managing the safe oversight of the largest fleet of aircraft in the world, while continuing to support the innovation of new and novel technologies is a challenge, but one that we recognize is vital to the economic growth of our country. The U.S. aviation manufacturing industry provides the livelihood for millions of Americans and is a dynamic and innovative industry that we are proud to oversee.

FAA certification is vital to the production of aircraft and aircraft components both domestically and internationally. Our certification means that the product was thoroughly reviewed, tested, and analyzed, and has been deemed to meet the stringent safety standards we require.

Certification is a dynamic process with both industry and the FAA having important roles and responsibilities critical to success. We are constantly working to improve the process. Both in response to Congressional direction, and on our own initiative, the FAA is working closely with industry to understand and respond to their concerns in order to improve the efficiency and effectiveness of the certification process without compromising safety. Central to the success of

this effort is transparency. All parties need to know what we are doing and why, as well as what is working and what is not. I would like to share the FAA's vision on reforming the certification process, what we have been doing in response to the 2012 FAA reauthorization, and our efforts to drive certification reform at the local, national, and international level.

Certification Reform Vision

In order to support the safest, largest, most complex aviation system in the world, the FAA must continue to make our processes as efficient and effective as possible, while also maintaining high standards of safety. The future vision of AIR, or AIR:2018, aligns with the FAA's Strategic Initiatives and shows where we want to go and the type of work environment we want to create. Our vision is built around four key focus areas: safety, people, organizational excellence, and globalization. Certification reform is a key component of this vision. It includes initiatives in response to the requirements set forth in section 312 of the Federal Aviation Administration Modernization and Reform Act of 2012 (the Act), and internally driven activities to improve several components of the current certification process.

As an organization, we are confronted with new challenges every day: limited finite number of resources, new technologies, new entrants to the marketplace, and the expanding globalization of aviation. In order to address these challenges and the expectations of our stakeholders and the general public, we are applying safety management principles and using risk-based decision making to leverage our partnerships and designees to make better decisions about where to focus FAA resources. As a result, we are creating an agile, collaborative organization that embraces technology and is a leader in developing the future of aerospace.

Section 312 Implementation

Section 312 of the Act required the FAA to work with industry to develop consensus recommendations on ways to improve efficiency and reduce costs through streamlining and reengineering the certification process without compromising safety. In response to this direction, the FAA formed the Aircraft Certification Process and Review Aviation Rulemaking Committee (ARC), which developed six recommendations that resulted in 14 initiatives. To date, the FAA has successfully completed 10 of the 14 initiatives and is making significant progress on the remaining four initiatives. Many of the initiatives are directly related to FAA's efforts to expand the use of delegated authority and implement a risk-based systems approach to the oversight of that delegation system.

For example, as part of the FAA's ongoing commitment to improve responsiveness to industry as it certifies new products, the FAA replaced project sequencing with a new "project prioritization" process in September 2014. The new system prioritizes projects based on their safety benefits and complexity, and allows more efficient allocation of FAA's resources. In contrast to sequencing, project prioritization offers applicants a commitment to a response time for the review of compliance data based on the priority of the certification project. Now, applicants are able to initiate projects without delay. If an applicant is an Organization Designation Authorization (ODA) holder or is using an FAA-approved individual delegated representative, they can immediately move forward with much of the work required to certify the product.

The FAA plans to develop and track the metrics related to implementing the 14 recommended initiatives in three phases: measuring (1) the progress of implementing the initiatives throughout

FAA, (2) the outcomes of each initiative, and (3) the return on investment for the FAA and industry resulting from implementing the initiatives as a whole. The metrics for phase one have been developed and are contained in the latest revision of the Section 312 Implementation Plan posted on the FAA website.¹ Transparency and accountability in FAA's relationship with industry and a data-driven approach will make the agency more effective and efficient, and drive certification reform.

The initiatives recommended by the Section 312 ARC are helping us to identify and address national certification issues; however, we recognize that these steps may not solve the problems experienced by individual companies. Therefore, the FAA is reexamining how it conducts business and implementing internally driven initiatives at the local, national, and international levels.

Local Efforts

ODAs and individual designees play a vital role in the effort to streamline the certification process. AIR currently oversees 71 ODAs and more than 2,900 individual designees. The FAA is working with individual companies to establish short- and long-term goals to help them reach their vision of full utilization of ODA by reinvigorating the Partnership for Safety Plans. These safety plans outline operating norms, define a process for issue resolution, and identify certification priorities; they are our foundation for setting common expectations when working with a company and ensure that both sides are held accountable. Revitalizing the safety plans will be a catalyst to drive positive change, reinforce expectations for the highest levels of

¹ The Section 312 Implementation Plan is updated every 6 months and can be accessed at http://www.faa.gov/regulations_policies/rulemaking/committees/documents/index.cfm/committee/browse/committeeID/137.

regulatory performance, and reestablish the spirit of partnership for our mutual long-term success.

In collaboration with the Aerospace Industries Association and the General Aviation Manufacturers Association, we are also creating an ODA scorecard that will collect qualitative and quantitative data related to safety, FAA involvement, and ODA holder compliance. The scorecard will facilitate constructive dialogue between FAA management and ODA holders about compliance, timeliness, and any performance improvement enhancements that may be needed. Once individual goals are established through the reinvigoration of the safety plans, AIR will monitor how ODAs are progressing towards individual company goals. A national rollup of the scorecard data will also track progress by measuring the overall efficiency and effectiveness of all ODAs.

National Efforts

As the commercial aviation safety rate indicates, FAA continually strives to improve its performance in all areas, including certification. The Office of Aviation Safety (AVS) is an ISO 9000 registered organization and requires a quarterly review of Quality Management System (QMS) measures to gauge the overall health of AVS. The QMS measures also monitor the efficiency and effectiveness of the certification process. Our goal is to efficiently certify products that meet the safety requirements that the world recognizes as a gold standard. QMS measures are designed to quantify our efforts to maximize efficiency and minimize risk areas associated with the issuance of domestic Type Certificates, Supplemental Type Certificates, and Production Certificates.

The FAA is committed to continuous improvement, applying safety management systems principles and using risk-based decision making to determine the level of rigor necessary in each certification. For example, in support of the FAA's NextGen implementation goals, the agency issued a policy memo in March allowing ODA holders to conduct certain certification projects without notifying the FAA in advance. The policy contains criteria that, when met, alleviates the need for a Project Notification Letter (PNL). Relieving industry from the PNL requirement will result in time and cost savings to their design, manufacturing, and production processes.

AIR also updated its training curriculum to improve training for personnel assigned to oversee ODAs in October 2014. The enhanced training includes an emphasis on auditing the ODAs to ensure they are compliant with their agreed upon procedures. While expanding the number of ODA holders is critical to the industry's view of how to streamline certification, in order for FAA's staff to expand delegation, the agency must be able to show that industry is compliant with its regulatory responsibilities.

International Efforts

The FAA is a global leader in safety and efficiency. The global transportation network is changing, however, and the growth of the U.S aviation industry is expanding to global suppliers. We recognize the importance of working across geopolitical boundaries and have adapted our international efforts to maintain and enhance our leadership position.

In FY 2014, the FAA launched the Asia Pacific training initiative at the Singapore Aviation Academy to deliver targeted training to the regional civil aviation authorities and industry with the delivery of two courses – Cabin Safety Workshop and Changed Product Rule. This regional training initiative is an efficient way of using the FAA's resources while promoting the FAA's

policies and procedures globally. The training initiative helps achieve a consistent level of safety across geopolitical borders and facilitates the export of U.S. products and articles.

We are also working with our global partners to leverage our bilateral agreements. This year we are working with the European Aviation Safety Agency (EASA) toward mutual recognition of European Technical Standard Order Authorizations (TSOA) and FAA TSOAs, and to accept classification of basic Supplemental Type Certificates without further review. This will allow manufacturers of TSOA articles to sell their products in Europe without further approval by EASA. The agreement is expected to be finalized at the end of this year and will eliminate duplicative processes, reducing costs through time savings for both industry and the FAA.

The FAA also signed agreements with Transport Canada Civil Aviation and EASA to promote rulemaking cooperation. The activities between the U.S. and Canada under the Regulatory Cooperation Council encourage the sharing of rulemaking experiences to promote cooperation and align rulemaking requirements.

The FAA is working to enhance global manufacturing by working with our global partners to provide reciprocal assistance in overseeing manufacturing facilities. For example, the FAA and the Mexican Dirección General de Aeronáutica Civil (DGAC) are finalizing a Special Arrangement to allow the Mexican DGAC to perform certain types of certificate management activities on behalf of the FAA. A successful Special Arrangement is already in place in Brazil. The FAA will continue to leverage these arrangements as globalization of the aviation industry creates more complex business partnerships.

Section 313 Implementation

The FAA is also making progress in response to section 313 of the Act, which focused on the consistency and standardization of regulatory interpretation. In an effort to remain transparent with our stakeholders, the FAA posted an implementation plan for section 313 on the FAA website.² We have taken several steps to implement the recommendations and we have closed two of the six initiatives in the plan with the support of industry.

The highest priority initiative is to develop a single master source for guidance organized by regulation. We are making progress in reviewing our existing databases to assure the information is up to date. In January, I participated in a demonstration of the proof of concept for a tool that will link documents from multiple sources. I was impressed with the system's capabilities; it will link the regulatory material not only by regulation as requested by industry, but also by concept in case the user does not know the regulatory citation.

Unmanned Aircraft Systems

The FAA is also working tirelessly to safely integrate Unmanned Aircraft Systems (UAS) into the National Airspace System (NAS). The 2012 Act established the framework for this effort and tasked the FAA with safely integrating civil UAS into the system by September 2015. We have worked together with government partners and industry stakeholders to complete milestones put forward by the Act. This includes long-term planning for the future integration, collaborative research and development with interagency partners and industry, and the establishment of test sites and airspace for UAS research and development and testing. As of

² The Section 313 Implementation Plan can be accessed at http://www.faa.gov/regulations_policies/rulemaking/committees/documents/index.cfm/committee/browse/committeeID/239.

April 9, the FAA has issued 137 exemptions under section 333 of the Act and is working to decrease processing time for future exemptions.

In February, the FAA issued a Notice of Proposed Rulemaking that would allow routine use of certain small UAS in the NAS. The proposed rule would cover many potential small UAS operations and would offer a flexible framework for the safe use of small unmanned aircraft, while accommodating future innovation in the industry. Under the new authority provided in section 333, it contains operational limitations that will allow the entire category of small UAS to avoid airworthiness certification and be subject to the least burdensome level of regulation that is necessary to protect the safety and security of the NAS. As proposed, the United States would have one of the most flexible UAS regulatory frameworks in the world.

The FAA has successfully issued four UAS type certificates using existing FAA certification processes and is currently working with five other companies to type certificate their UAS using the FAA certification process available for Special Class aircraft. This process has sufficient flexibility to evaluate designs of aircraft of various size, speed, intended use, and area of operation. The same process is utilized for the certification of airships, gliders, and very light aircraft, and enables the FAA and applicants to collaborate together on appropriate certification requirements. It utilizes a risk-based classification and certification approach to identify the expected level of safety to determine FAA involvement and oversight. The FAA is currently developing advisory material to assist applicants, industry stakeholders, and the general public in understanding this process. As the FAA gains experience in certifying UAS products, it will continue to mature its policies and procedures to balance the needs of our applicants and UAS owners and operators with its responsibility to maintain safety in the NAS.

Conclusion

The FAA has made significant progress in implementing the requirements in section 312 of the Act and the initiatives recommended by the ARC to expand the use of delegated authority and establish a risk-based, systems approach to safety oversight. The FAA shares the Subcommittee's desire to streamline aircraft certification and will continue to implement internally driven reform activities at the local, national, and international levels.

To become more effective and efficient while maintaining and improving aviation safety, the FAA must collaborate with industry and improve transparency with stakeholders. When it comes to working together with industry, we need to respect each other's goals. For the FAA, the goal is a product that is compliant with the regulations. Industry wants to find ways to get new and safer products to market efficiently. For both of us, the safety of the aviation system is paramount. We are working to find ways to be more sensitive and responsive to industry's schedules without sacrificing compliance.

The FAA is tracking the progress of implementing the initiatives, and will develop means to measure the performance outcomes and the global return on investment for the FAA and industry as a whole. The FAA will continue efforts to develop meaningful metrics and a data-driven approach that promotes open, constructive dialogue, facilitates positive change, and keeps both sides accountable for certification reform.

This concludes my statement. I will be happy to answer your questions at this time.