

**STATEMENT OF MARGARET M. GILLIGAN, ASSOCIATE ADMINISTRATOR FOR AVIATION SAFETY, FEDERAL AVIATION ADMINISTRATION, BEFORE THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON AVIATION, DOMESTIC AVIATION MANUFACTURING: CHALLENGES AND OPPORTUNITIES, JULY 23, 2014.**

Chairman LoBiondo, Congressman Larsen, Members of the Subcommittee:

Thank you for inviting me to discuss the Federal Aviation Administration's (FAA) role in supporting domestic aviation manufacturing. The FAA operates the safest and most complex airspace system in the world. The level of safety in the U.S. National Airspace System (NAS) is directly linked to the FAA's high safety standards, rigorous certification processes, and strong collaboration with industry stakeholders. Equally importantly, U.S. aircraft and products operate throughout the world. In this way, we export our level of safety and provide protections to U.S. citizens wherever they travel. Our standards are designed to be rigorous without being overly burdensome. The FAA continuously reviews its certification processes in an effort to increase safety and efficiency.

**FAA Certification**

The FAA certifies all civil aviation aircraft and components. Some version of our certification process has been in place since 1964 and it has served us well. This does not mean, however, that the process has remained static. Over the past 50 years, the regulations covering certification processes have been under constant review. As a result, the regulations governing the aviation certification process set forth in 14 C.F.R. Part 21 have been modified over 90 times and the rules applicable to large transport aircraft have been amended over 130 times. FAA regulations and policies have evolved to adapt to an ever-changing industry that uses global partnerships to develop new, more efficient, and safer aviation products and technologies.

We utilize a risk-based approach to improving aviation safety by focusing our certification resources and efforts on those areas that have the highest risk. Whenever a particular decision or event is critical to the safety of the product or to the determination of compliance, the FAA is involved in some manner. The FAA may be involved directly or it may utilize the designee system, which was established by Congress in 1938 and is critical to the success and effectiveness of the certification process. In accordance with Congressional direction, we have advanced from individual to organizational designees, which was a natural progression of the designee system. The designee program plays a critical role in our ability to efficiently certify the wide range of aircraft and components developed and manufactured in the United States.

Before an aircraft, engine, propeller, or other component is certified by the FAA, the applicant is required to develop plans and specifications, and perform the inspections and tests necessary to establish that the design of an aircraft or article complies with FAA regulations. The FAA is responsible for determining that the applicant has shown that the design meets FAA standards. We do that through review of data and by conducting risk based evaluations of the applicant's work.

When a new design of aircraft is being proposed, the designer must apply to the FAA for a type certificate. While an applicant usually works on its design before discussing it with the FAA, we encourage discussions with the FAA well in advance of presenting a formal application. Once an applicant approaches us, a series of meetings are held both to familiarize FAA with the proposed design, and to familiarize the applicant with the applicable certification requirements. A number of formal and informal meetings are held on technical and procedural issues. Once the application is made, issue papers are developed to provide a structured way of documenting the resolution of technical, regulatory, and administrative issues that are identified during the

process. The applicant must show that its design meets applicable existing airworthiness requirements.

The FAA is responsible for determining that an applicant has shown that its design meets the required standards. If the FAA finds that a proposed new type of aircraft, engine, or propeller complies with safety standards, it issues a type certificate. The FAA may subsequently issue a production certificate, allowing the manufacturer to produce duplicate products under the FAA-approved type design. Before a production certificate is issued, our inspectors conduct a rigorous review of the applicant's quality system, production tooling, manufacturing processes and controls, inspection methods, and supplier control procedures.

The FAA Aircraft Certification Service has both a high volume and a wide range of certification applications under review at any given time. In Fiscal Year 2013 alone, the FAA approved 189 revisions to aircraft type certificates, 444 new Supplemental Type Certificates (STC) for aircraft components, an additional 397 amended STCs, and over 2,200 Parts Manufacturer Approvals for replacement parts on aircraft. At the same time, we issued 383 Airworthiness Directives (ADs) to correct unsafe conditions and 54 Special Airworthiness Information Bulletins (SAIBs) to alert operators to potential risks.

### **Domestic Manufacturing in a Global Economy**

Domestic manufacturing of civil aviation aircraft and components plays a critical role in the U.S. economy. The FAA has facilitated the expansion of domestic manufacturing by certifying new production facilities across the country. We also facilitate international expansion by domestic manufacturers through Bilateral Aviation Safety Agreements. These agreements allow certain aircraft components to be imported and exported, while ensuring that safety standards are met.

The U.S. has bilateral agreements with over 47 countries, including an agreement with the European Union that covers 28 nations in Europe. These agreements allow U.S. companies to import aircraft components and also allow domestic manufacturers in the U.S. to export their products.

It is important to note, however, that even if an aircraft or component is designed or manufactured in a country with whom we have a bilateral agreement, it must meet the same stringent safety standards as if it were designed or manufactured in the U.S. While the FAA facilitates the import and export of aircraft components in a global economy, it never compromises safety.

When an aircraft, propeller, engine, or other component falls within the scope of one of our bilateral agreements with a foreign state, they are eligible for importation. Each state with whom we have a bilateral agreement has an aviation authority that has overseen and approved the design and production of the product. But before it can be imported or used in aircraft in the U.S., the foreign authority must send us a request to validate the product. That request must comply with the FAA's validation order and the bilateral agreement under which it arises. We then validate the item before issuing a type certificate or letter of design approval, which allows the item to be imported and used in the NAS. Through this process, U.S. companies can leverage the assets, innovation, and resources from around the world. These same bilateral agreements allow domestic manufacturers to expand their business internationally by exporting goods manufactured in the U.S.

In order to manufacture aviation components in the U.S., a company must obtain a production certificate for each location or manufacturing plant at which they produce aircraft components.

The FAA encourages and facilitates the growth of domestic manufacturing by issuing production certificates to U.S. companies who wish to expand the number and location of production facilities in the U.S. As we authorize expansion we must assure we have resources to exercise proper oversight and ensure the items produced and used in the U.S. meet the high safety standards established by the FAA.

### **Streamlining Certification**

The FAA continues to seek ways to make our certification process more efficient and cost-effective, while maintaining the highest levels of safety. In February of 2012, Congress passed the FAA Modernization and Reform Act of 2012. Section 312 directed the FAA to work with industry representatives to review and reform the aircraft certification process. In response to Section 312, we formed the Aircraft Certification Process Review and Reform Advisory Rulemaking Committee (ARC). Through the ARC, industry representatives developed consensus recommendations on ways to reduce the time and cost of certification without compromising safety. The ARC developed six recommendations, which are mapped to 14 specific FAA initiatives. These initiatives include expanding the use of delegation and designees, updating the system for sequencing certification projects, developing metrics to measure the effectiveness of process improvements, and other efforts. The process has been both transparent and collaborative. We meet regularly with industry representatives, including the Aerospace Industries Association (AIA) and General Aviation Manufacturer's Association (GAMA), to continuously update them on the status of the initiatives. We publish implementation updates on the FAA web site every six months. Our next update will be posted by the end of this month.

Since the original release of the Implementation Plan on January 7, 2013, the FAA has made progress on all of the initiatives. One that has been of particular interest to industry is the organizational designation authorization (or ODA) Action Plan. The FAA published an order that included a number of enhancements requested by industry to increase the efficiency of organizational designation authorization certification processes and improve the utilization of ODA authority. The order provides for better communication between FAA and ODA holders, as well as more flexibility for the ODA. Greater flexibility translates into the ODA having more control over its projects timelines. The effectiveness of the changes made to the order were discussed last week with industry.

Another initiative under the Section 312 Implementation Plan was the part 23 reorganization. In August 2011, the FAA chartered the Part 23 Reorganization Aviation Rulemaking Committee to provide recommendations in this area. We believe that transforming the design standards for small aircraft into requirements that are based on airplane complexity and performance will provide for streamlined approval of safety advancements. This will improve safety and reduce the regulatory cost burden for both the FAA and manufacturers. This approach is expected to advance the safety of general aviation by spurring innovation and the adoption of technical advancements.

Section 313 of the FAA Modernization and Reform Act of 2012 directed the FAA to standardize its regulatory interpretations. In response, we formed the Consistency of Regulatory Interpretation Aviation Rulemaking (CRI ARC). The FAA collaborated with industry stakeholders to develop recommendations to address issues related to the consistency of regulatory interpretations. These recommendations call for systemic, long-term improvements that will have lasting impact, as well as meaningful metrics that can be tracked internally and by

industry. These large scale efforts will lead to increased standardization by assuring that FAA staff have access to FAA regulatory interpretations, including those that address the regulations governing the certification process.

In addition to large-scale initiatives to continually improve the certification process, the FAA is undertaking efforts to facilitate the efficient approval of certain aircraft components. For example, the FAA recently developed a policy to streamline approval for angle of attack (AOA) indicators for general aviation aircraft. AOA devices, which are common on military and large civil aircraft, can be added to small aircraft and supplement airspeed indicators and stall warning systems. This alerts pilots of a low airspeed condition before a dangerous aerodynamic stall occurs, especially during takeoff and landing. Although AOA systems have been available for some time, the effort and cost associated with gaining approval has limited their installation in general aviation. Installation of these systems may aid in preventing loss of control accidents, which is a common cause of fatal accidents in GA and is a top focus area of both the FAA and the general aviation (GA) community. The streamlined requirements for AOA indicators are expected to reduce the cost of AOA indicators, which should lead to greater use of the devices and increased safety in general aviation.

## **Conclusion**

Mr. Chairman, I hope this serves to illustrate the ways in which the FAA supports the certification of new and innovative technologies and domestic manufacturing. I am proud of the safety record we have achieved together and I look forward to our continued partnership.

This concludes my prepared statement. I'd be pleased to answer any questions you may have at this time.