

AEA Tells the FAA Its Proposal is ‘ADS-B on Steroids’

INDEPENDENCE, MO — The Aircraft Electronics Association (AEA) sent comments on the recent Notice of Proposed Rulemaking (NPRM) on Automatic Dependent Surveillance–Broadcast (ADS–B) to the Federal Aviation Administration late Monday evening, March 3. The AEA represents more than 1,300 aviation businesses worldwide, including repair stations specializing in maintenance, repair and installation of avionics and electronic systems in general aviation aircraft. AEA membership also includes manufacturers of avionics equipment, instrument manufacturers, airframe manufacturers, test equipment manufacturers, major distributors, and educational institutions.

The AEA, in general, supports the requirement to adopt ADS-B. However, the AEA does not support this proposed regulation. “The FAA has failed to offer a proposal that is cost-effective, safety enhancing, or a complete proposal,” said Paula Derks, president of AEA. “In addition, contrary to public law, the FAA is proposing a performance standard in this NPRM that is not available for the public to review.”

The FAA claims this is but the first step toward a next-generation communications, navigation and surveillance (CNS) requirement. As such, this partial proposal does not include the total cost of the next-generation requirements; will cause the industry excessive financial burden; and will compromise the FAA’s claims of safety. In addition, this proposal will not allow AEA members to manufacture, install or service avionics equipment with any kind of assurance this equipment will be viable and appropriate for use in the National Airspace for the CNS equipment’s useful life.

FAA Must Use an Evolutionary Process

“The FAA must develop a proposal utilizing an ‘evolutionary’ process that utilizes existing avionics to the maximum extent possible, rather than this stepped ‘revolutionary’ process of wholesale technology replacement of the entire CNS suite in general aviation aircraft,” according to Ric Peri, vice president of government and industry affairs for AEA, and author of the AEA’s comments.

The FAA’s proposal does not build upon the evolutionary investment made by thousands of aircraft owners and operators who purchased the first-generation ADS-B equipment. Rather, the FAA’s performance requirements have made the original ADS-B equipment obsolete with its revolutionary approach to NextGen.

A Complete New Suite of CNS Equipment by 2025

In Section I. A., “Vision of the Future,” it defines the goal of the Next Generation Air Transportation System, or NextGen, as “a system flexible enough to accommodate safely whatever number, type and mix of aircraft there will be in U.S. skies by 2025.” It further describes NextGen as “an aircraft-centric system with performance-based requirements. The future system will describe performance for navigation, communications and surveillance.”

It is clear this ADS-B proposal is simply the first element of a broad change to the CNS requirements for flight in the National Airspace. It is inappropriate for the FAA to propose sweeping changes, then perform an economic analysis only on one element of a thorough remodeling of the CNS requirements of NextGen.

By the FAA's statements, the aircraft-centric requirements for NextGen will be required in less than 17 years, and the complete new suite of avionics will be required only five years after the ADS-B proposal.

The FAA must discuss its entire proposal for NextGen communications, navigation and surveillance equipment, not just piecemeal the proposal to the American public one technology at a time. The true consolidated cost of NextGen must be presented.

FAA Approval

The FAA once again publishes the performance requirements of equipment, but does not require the equipment be FAA-approved. This continually causes confusion within the industry.

In the proposed 91.225, the FAA should clarify when the ADS-B equipment must be "FAA-approved" and when the manufacturer simply needs to show the ADS-B equipment meets the performance requirements of the respective TSO.

ADS-B Equipment and Installation Costs

The FAA is estimating equipment and installation costs for equipment that currently does not exist. Because the FAA has established this revolutionary change in basic ADS-B performance requirements, there isn't any equipment that currently meets the "minimum performance standard" for light general aviation aircraft.

In addition, at the FAA's estimate of time, it will take one week for each installation. There are roughly 800 certified repair stations to work on the estimated 160,000 light GA aircraft affected by this proposal. At one aircraft per week, each repair station could process 50 aircraft per year or 40,000 aircraft by the entire industry per year — as such, it would take four years of constant production just to meet the deadline. Unfortunately, because there is no TSO-154b-approved equipment in existence today, the installation process cannot begin until the equipment is designed, tested, certified and manufactured. This process takes a minimum of five years.

The FAA's timeline of Jan. 1, 2020, is a mere 12 years away. Assuming five years to ramp-up full production of ADS-B equipment, it leaves only seven years to equip the entire general aviation fleet. This is not realistic. A better estimate of completion would be 2025.

While the Aircraft Electronics Association, in general, supports the requirement to adopt ADS-B, it does not support this proposed regulation as written.

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