TLS Regulatory Compliance

The FAA has been engaged in the technical evaluation and feasibility study of the TLS Transponder Landing System since the mid-90s.

General Qualifications

The TLS Transponder Landing System has been certified by the Federal Aviation Administration (FAA) as meeting or exceeding all ICAO Annex 10 requirements for a Category I Instrument Landing System, which include criteria related to accuracy, integrity, and continuity of service for such approach and landing operations and dependent facilities. Furthermore, these requirements are written to ensure the functionality, performance, and feasible integration of candidate products, independent of underlying technology or precedent specifications of like products. Such requirements are to be carefully considered by any air navigation service provider seeking to procure navigation aids or other airspace system enhancements.

Siting Criteria

If an Air Navigation Service Provider (ANSP) in another State intends to install and use the TLS Transponder Landing System, the FAA recommends the system conform to ICAO Annex 14 requirements for Instrument Landing System (ILS), including the use of frangible equipment that can be placed in obstacle free zones with a declaration that the equipment is "fixed-by-function." Such specifications can be provided by the system's manufacturer. TLS frequencies should be coordinated by the State or ANSP's spectrum management office in the same way ILS frequencies are coordinated and assigned. ANSPs should also publish TLS operational guidance in the State's Aeronautical Information Publication (AIP).

Approach Procedure Design and Approval

FAA Order 8200.47 Flight Inspection of Transponder Landing System, accessible online at 8200.47 - Flight Inspection of Transponder Landing System provides detailed flight inspection procedures that can be used for analysis and publication of TLS IAPs (Instrument Approach Procedures). The ANSP should ensure that the designer of such approaches has the competency to design the flight procedure in accordance with current versions of ICAO Procedures of Air Navigation Services - Air Operations (PANS-OPS) and/or FAA Terminal Instrument Procedures (TERPS) and that the procedure design meets the quality standards defined in ICAO Document 9906 and any national standards and requirements applicable in the ANSP's jurisdiction.

Operator Training and Certification

All IFR-equipped aircraft and IFR-licensed pilots can fly a TLS approach, with no certification for operators, pilots, aircraft, or equipment beyond what is required for Category I ILS. As with ILS, the guidance provided by the TLS is only intended for aircraft with ATC clearance to execute a specific TLS approach procedure and that have tuned their receivers to the appropriate frequency.