Eve Air Mobility

Special Federal Aviation Regulation

We are reimagining mobility. For everyone. Everywhere.

Eve Air Mobility (NYSE: EVEX & EVEXW) is a global electric vertical takeoff and landing (eVTOL) aircraft manufacturer and services and software leader focused on accelerating the world's transition to sustainable, all-electric flight. These eVTOLs, designed for one pilot and four passengers, represent a new category that is neither a helicopter nor a fixed-wing aircraft.

As global authorities develop new regulations to ensure the certification and safe operations of eVTOLs, the U.S. Federal Aviation Administration (FAA) has published operational regulations in a Special Federal Aviation Regulation, or SFAR.

In the first of a series of blog posts that will break down the policies and regulations guiding our industry, read about the SFAR and how it is helping shape the future of Advanced Air Mobility in the U.S.

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What is an SFAR?

SFAR stands for Special Federal Aviation Regulation and is an interim rule issued by the FAA to address a unique situation. In this particular case, the SFAR is focused on eVTOLs and will be in place for 10 years while the FAA gathers data and information through regulatory requirements. They will do this through regular, formal, and informal interactions with the public and industry including conferences, data-sharing systems, and outreach initiatives. An Aviation Rulemaking Committee will be established in accordance with the FAA Reauthorization Act of 2024.

During the 10-year period, the FAA can make changes to different areas within the regulations as they learn more about the performance of these aircraft and receive performance-based data that validates the level of safety and being able to make adjustments.

Read the SFAR: Federal Register: Integration of Powered-Lift: Pilot Certification and Operations; Miscellaneous Amendments Related to Rotorcraft and <u>Airplanes</u>

FAA FAQs: Powered Lift Part 194 SFAR Frequently Asked Questions (FAQ) Federal Aviation Administration (faa.gov)



Q: If these new aircraft are commonly called eVTOLs, then why does the SFAR refer to Powered-Lift aircraft?

The FAA has included eVTOLs in the definition of powered-lift aircraft in 14 CFR Part 1. Although other Civil Aviation Authorities (CAAs) have regulations in place for powered-lift aircraft, some of them have established a new category of aircraft. For instance, EASA and ANAC refer to them as VTOL Capable Aircraft or VCAs.

Q: Why did the FAA decide to put in place an SFAR?

While the FAA already had regulations in place for powered-lift pilot training and certification, these were developed in the 1990s and do not adequately address this new type of aircraft powered by electricity and the different designs being considered by various eVTOL manufacturers. The various aircraft operating regulations such as 14 CFR Part 91 (private operations), 14 CFR Part 135 (on-demand and commuter operations for smaller aircraft) and others also did not account for powered-lift aircraft in the regulations. The SFAR now adds powered-lift aircraft into these operating regulations where applicable. The primary issues that the SFAR addresses are the operational requirements and pilot training and certification.



Q: What are operational requirements and which of these does the SFAR cover?

Operational requirements are what the eVTOL fleet operators are required to adhere to that have an impact on the product design certification and performance of the aircraft from a manufacturer's perspective.

Some examples of the operational requirements that the SFAR addresses include:

- Energy reserves
- Performance capabilities
- Equipment that is installed in the aircraft such as an Emergency Locator Transmitter (ELT), the Cockpit Voice Recorder (CVR), the Flight Data Recorder (FDR) and other equipment
- Visibility and minimum safe altitudes

Q: How does the FAA decide what the actual requirements are for each of these operational areas?

When the FAA originally released the SFAR for comments in 2023, they decided that they would adopt performance-based requirements for airplanes in many different areas. As eVTOLs take off and land vertically like a helicopter and fly like an airplane in cruise flight, the FAA chose to apply the airplane category for operational requirements which was a more conservative approach.





When the FAA reviewed the comments they received following the original publication, they revised their approach to nearly all of the operational requirements in the final publication to be based on the helicopter category as these will similarly perform shorter missions in urban environments primarily in controlled areas.

Q: Why did the FAA adopt the helicopter category for these operational requirements if these aircraft are not actually helicopters?

- There are a lot of similarities with the operations of helicopters, and the anticipated operations of powered-lift aircraft such as (but not limited to):
- The need for smaller areas to take off and land heliports vs. vertiports
- You do not need a runway to take off and land like an airplane.
- Helicopters and eVTOLs will be flying at lower altitudes than airplanes.

However, helicopters use fossil fuel propulsion systems and eVTOLs use electric propulsion systems producing zero-local carbon emissions.



Q: Are there alternative pathways to achieve an equivalent level of safety to the helicopter category for these operational requirements?

The FAA has provided additional alternative pathways for meeting these operational requirements where an operator can request a deviation from the helicopter category. The operator must be able to demonstrate that the deviation they are requesting provides an equivalent level of safety for the FAA to approve the deviation.

Before any waivers to the helicopter category can be submitted by the operator to the FAA, Eve and other aircraft manufactures will have been working with the FAA to receive various approvals for their eVTOL.

Q: I am already a commercial pilot and now I want to be able to fly one of these eVTOLs. What do I need to do?

Traditionally, the FAA has required two seats to be in the cockpit of an aircraft for a pilot to receive training with an instructor. However, not every eVTOL being developed has dual pilot controls in the cockpit with many of them having single pilot controls like Eve's aircraft.

The SFAR now provides an alternate pathway for an existing commercial pilot to concurrently obtain an instrument powered-lift rating, commercial poweredlift certificate and a type rating on that specific eVTOL. The pilot applicant must already hold a commercial pilot certificate with a helicopter or airplane category.





Q: What kind of training can l expect to receive if l am already a commercial helicopter or airplane pilot?

To begin the process of becoming a certified eVTOL pilot on Eve's eVTOL, a pilot will be required to add the powered-lift category rating to their existing commercial pilot certificate and instrument-rating along with the type rating for Eve's eVTOL. To accomplish this, pilots will be able to train and check to obtain all three ratings concurrently. This is done through a combination of theoretical and flight training in a flight simulator and the aircraft.

As a commercial pilot, the additional training that pilots will need to fly an eVTOL consists of ground school/ theoretical training, flight training in a Full Flight Simulator, familiarity and demonstrations flights with an instructor in the passenger seat of the eVTOL, solo flights and finally supervised operating experience (with a qualified pilot on board).

The SFAR has provided an alternate pathway to train and check in a powered-lift aircraft equipped with a single pilot seat and single set of flight controls. The SFAR states that there will be a minimum of:

- 20 training hours in a full flight simulator
- 20 hours in aircraft performed as solo flights
- 10 hours under the observation of a qualified pilot or pilot instructor.





Eve will develop the expected training footprint to be certified on its aircraft and submit this to the FAA's Flight Standardization Board (FSB). The FSB will release a report that will outline the training footprint and hours for each eVTOL. Based on the FSB report, a commercial eVTOL fleet operator will then have to receive approval for their own eVTOL pilot training program.

Q: I am not a pilot but have always wanted to be one. eVTOL aircraft look amazing and I want to go through pilot training and become certified to fly one. What do I need to do?

The SFAR currently does not address ab initio pilot training for a powered-lift aircraft. Ab initio pilot training is a flight training program for aspiring commercial pilots that starts from zero experience. To become a trained and certified eVTOL pilot you must already hold a commercial pilot license.

Disclaimer



This document provides a general overview of the Special Federal Aviation Regulation (SFAR) published by the Federal Aviation Administration (FAA). It is for informational purposes only and does not constitute legal, regulatory, or operational advice from Eve Air Mobility. Readers are advised to review and analyze the full text of the SFAR independently, accessible via the link included in this document, and seek guidance from their own advisors, as necessary. This document is not intended to replace or serve as a substitute for the thorough review and understanding of the SFAR or any applicable requirements.

For more information about Eve Air Mobility or to learn more about our approach towards compliance with the SFAR, please visit

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