# Hazy timeframe for reaching electric plane era

October 6 2022, by John BIERS

Eviation's 'Alice' landed successfully at the conclusion of its first flight on September 27, 2022 in Moses Lake, Washington.

Recent test flights suggest the era of electric airplanes is coming closer, but aviation experts caution that achieving commercial use hinges on

regulatory approval which has an unknowable timeframe.

Eviation Aircraft successfully completed a test flight in Washington state last week, showcasing a plane the company plans to begin delivering to airlines in 2027.

That came on the heels of an Icelandair flight in August which carried Iceland's president and prime minister among its passengers.

Besides the benefit in eliminating carbon dioxide emissions, electric airplane travel potentially means less noise than conventional plane transport, as well as eliminating the need for jet fuel, a major expense for commercial airlines.

Gregory Davis, chief executive of Eviation, called last week's test flight the start of "the next era of aviation," and said it offered a glimpse of what "affordable, clean and sustainable aviation looks and sounds like."

But industry experts speak of a hazy timeframe before that future becomes reality, in part because of murkiness over how quickly US air safety authorities will move to greenlight new technology from a seven-year old company with no operating history.

Eviation is "stepping into some unknown areas as far as how you certify and support electric aircraft," said Glenn McDonald, a principal at AeroDynamic Advisory, a consultancy.

While the 2027 timeframe for the Eviation plane "could be realistic," McDonald noted that the Federal Aviation Administration has taken a more painstaking approach to certifications since the Boeing 737 MAX crashes in 2018 and 2019.

The two-seat Velis Electro, certified by the European Union Aviation

Safety Agency in 2020, is the only electric plane currently cleared for service.

Michel Merluzeau, director of aerospace and defense analysis at AIR consultancy, said the end of the decade was probably a more realistic timeframe than 2027 for the US market.

"It's fundamentally early days," said Merluzeau, adding that the FAA will only approve the vehicle after exhaustive testing.

Eviation CEO Gregory Davis observing the all-electric 'Alice' aircraft after its test flight on September 27, 2022.

## Much testing ahead

The September 27 test flight of Eviation's "Alice" aircraft was an eight-minute voyage that reached an altitude of 3,500 feet (1,065 meters) on a sunny morning.

The company plans to produce a cargo plane, a six-seat "executive" version and a "commuter" model carrying up to nine passengers on flights of up to 250 nautical miles.

Davis characterized the test plane as "prototype aircraft built by hand." The commercial version is expected to be the same size and weight, but with more advanced battery technology.

"We fully expect to have our choice" of battery, Davis told AFP in an interview.

Among those closely watching the process is Global Crossing Airlines Group, a Miami flight company that has signed a letter of intent for 50 aircraft it plans to fly in Florida, the Bahamas and the Caribbean.

Alice's appeal stems from the savings in jet fuel costs, said Ryan Goepel, chief financial officer at Global Crossing, which has said it expects to begin receiving planes in 2027.

"We see this as a product that has a lot of demand and really low operating costs," Goepel said, adding that the test flight represented a "huge milestone."

Davis said the next step will be to analyze flight data, and the company expects to begin FAA testing in 2025, with commercial production also beginning that year.

The agency declined to comment directly on Eviation, but a spokesman said, "speaking generally, the FAA can certify these new aircraft through its existing regulatory framework."

The all-electric aircraft 'Alice' taxis on the tarmac after its test flight on September 27, 2022 in Moses Lake, Washington.

"Some certifications could require the FAA to issue special conditions or additional airworthiness criteria, depending on the type of project," the official said in an email.

Setting specific conditions is a typical response from the FAA when addressing new technologies but that process can "take a while," said

Waruna Seneviratne of the National Institute for Aviation Research at Wichita State University.

Testing will be extensive before the FAA allows the jet on the market for the flying public, Seneviratne predicted.

"The goal is to find that one incident, one bad part that's going to take an airplane down," he said.

Merluzeau said the fact Alice is a new plane rather than an established model reconfigured with an electric engine amounts to "an incredibly complex assignment" for the FAA.

A lengthy, costly certification process would be a challenge for the young firm.

"How do you survive long enough as a company when you know the certification is going to take a long time?" Merluzeau said. "How will they be able to do that when they are burning through cash?"

Eviation is currently backed by the Clermont Group, a Singapore private investment group chaired by Richard Chandler, whose wealth is estimated by Forbes at $2.6 billion.

An Eviation spokeswoman said the company "will be pursuing additional funding on the path to certification and production."

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