A MILESTONE ON THE PATH TO NET-ZERO AVIATION EMISSIONS - AMPAIRE POWERS UP HYBRID ELECTRIC ECO CARAVAN

News / Manufacturer

Ampaire earlier this month began ground testing the propulsion system on its first hybrid-electric Cessna Grand Caravan flight test aircraft, which the company has branded the Eco Caravan. This aircraft represents a milestone for hybrid electric aviation, building on the technology and heritage of Ampaire's Electric EEL aircraft.
In light of record fuel prices and growing concern over the environmental impact of aviation, Ampaire's Eco Caravan is uniquely positioned to enable current Caravan operators to continue to thrive while achieving dramatic operating cost and emissions savings.

The upgraded Eco Caravan offers game-changing fuel savings over the original aircraft of up to 70% on short-hop routes and over 50% on long-haul flights, while still carrying 9 passengers or cargo. The aircraft can achieve an emissions reduction of up to 90% if using sustainable aviation fuel. The Eco Caravan is capable of operating from airports without electric charging infrastructure.

Ampaire has decided to move forward as an independent company on its mission to reduce

aviation emissions. Ampaire will proceed with development of the Eco Caravan and the application for a supplemental type certificate (STC) for its hybrid propulsion system, and will continue to work closely with operators globally to maximize benefits for their fleets.

The Eco Caravan is the first hybrid electric aircraft to enter the FAA certification process. The STC process can take much less time than certifying an entirely new aircraft, allowing a certification target of 2024. By upgrading current aircraft to hybrid-electric power, it also enables the Eco Caravan to improve the emissions and affordability of existing fleets, a key need for Ampaire customers.

“Powering up a new propulsion system, one that is fully integrated into a flyable aircraft, is a tremendously exciting milestone for Ampaire,” said CEO and co-founder Kevin Noertker. “We expect the Eco Caravan to be the first in a series of hybrid electric upgrades for a number of aircraft models that will transform the industry by lowering emissions and costs.”

Noertker described the first ground power runs at Los Angeles’s Hawthorne Airport as an initial validation of the system’s operation. First flight of the Eco Caravan is expected in the second half of 2022.

Los Angeles-based Ampaire was formed in 2016 with a mission to become the world’s most trusted developer of practical and compelling electric aircraft. To start, the company is upgrading existing passenger aircraft to hybrid-electric power—the quickest and most capital efficient approach to making commercial electric air travel a reality with currently available technology. Electrification has the potential to unleash a new mobility market. Union Bank of Switzerland (UBS) estimates the global opportunity for hybrid-electric aircraft at $178 billion by 2040.

Ampaire has scored a series of industry firsts since the 2019 maiden flight of the company’s Electric EEL technology testbed aircraft. The company now has two EEL aircraft flying, one an engineering testbed for the Department of Energy’s ARPA-E advanced programs unit and a second as the company’s market survey demonstrator.

The EEL was the first hybrid-electric aircraft to receive an experimental market survey flight certificate from the FAA and flight permit from the CAA in the UK. It conducted landmark flight trials in 2020 with Hawaii’s Mokulele Airlines on actual airline routes. In 2022, pilots from the UK’s LoganAir regional carrier flew the aircraft on market survey flights. The EEL has made a series of long-range demonstration flights, including Los Angeles to San Francisco along a 296 nautical mile route, and a trans-UK flight of 418 nautical miles from Perth, Scotland to Exeter, England.

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