

Airbus' E-Fan Readied For Cross-Channel Flight

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The E-Fan 2.0 demonstrator will teach Airbus a lot about electric propulsion.

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Airbus is preparing its E-Fan electric aircraft demonstrator for a ground-breaking flight across the English Channel next month.

The E-Fan demonstrator is proving technologies that Airbus

hopes will help in the development of a family of electrically-powered light aircraft for training and private use and in the future potentially lead to an electric-powered airliner carrying 80-90 passengers in the 2030s or 2040s.

The E-Fan demonstrator, formally unveiled by Airbus (Static C4, Hall Concorde 17) in April 2014, has now completed more than 100 flight hours and recently conducted a 53-min. flight thanks to a new battery system installed in the weeks prior to the Paris Air Show, where the aircraft has been performing daily in the flying display.

Earlier this month, Airbus announced that the demonstrator would perform a cross-Channel flight in the spirit of Louis Bleriot in early July, flying from Lydd, UK across to Calais, France.

Until recently the E-fan had been using a lithium-polymer battery. But engineers have now installed a heavier, dense-packed lithium-ion battery system in the wings. Adding the additional 30 kg batteries has forced E-fan engineers to remove weight from the aircraft, but the installation is able to provide 160w/kg of power compared to 100w/kg with the lithium polymer battery system.

Engineers are now developing a serial production electric aircraft family. The first of the family, the E-fan 2.0, has been designed for flight training and will have a maximum take-off weight of around 600 kg, allowing it to be classified as a Light Sports Aircraft. Airbus has established a subsidiary called Voltair that will build the aircraft in a new factory at Pau in south-western France.

“This will be a factory of the future,” says Jean Botti, Airbus Group Chief Technical Officer. “We are not talking about a giant factory. It will be highly digitized and will pilot technologies for the future,”

The plan was originally to construct the E-Fan aircraft in new-build facilities on the north side of Bordeaux's Merignac Airport as part of a joint arrangement between Airbus and the Aquitaine region government. But the facility will now be constructed at Pau Airport, close to design partner Daher. Botti says the facility will have direct access to the airport runway and enjoys good meteorological conditions for flight testing.

The E-fan 2.0 will fly in 2016 and enter the market in 2017. A larger four-seat E-fan 4.0 will follow two years later. The 4.0 will feature a hybrid power plant to boost range and endurance.