

# Airbus, Rolls-Royce, Siemens working on hybrid plane

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The artist rendering provided by Airbus on Tuesday, Nov. 28, 2017 shows an Airbus e-FanX hybrid test plane. The aircraft will be flying with one electric turbofan motor and 3 conventional engines. The electric power for the electric engine is being produced by a turbine within the plane that serves as a generator. (Airbus via AP)

Airbus, Siemens and Rolls-Royce are teaming up to develop a hybrid passenger plane that would use a single electric turbofan along with three conventional jet engines running on aviation fuel.

The plane is an effort to develop and demonstrate technology that in the

future could help limit emissions of carbon dioxide from aviation and reduce reliance on fossil fuels.

The three companies said Tuesday they aim to build a flying version of the E-Fan X technology demonstrator plane by 2020.

The aircraft would be based on the existing BAe 146 four-engine regional jet. The hybrid version would generate electric power through a turbine within the plane. That power would be used to turn the fan blades of the single electric turbofan engine.

If the system works, a second electric motor could be added, the companies said.

The companies said plane maker Airbus would be responsible for building the aircraft's systems into a working whole, control systems and flight controls. Jet engine maker Rolls-Royce would make the generator and the turbo-shaft engine and engineering company Siemens would deliver the two-megawatt electric motor to power the engine.

The companies said they were looking ahead to the European Union's long-term goals of reducing CO<sub>2</sub> emissions from aviation by 60 percent, as well as meeting noise and pollution limits that they said "cannot be achieved with technologies existing today." CO<sub>2</sub>—carbon dioxide—is a greenhouse gas that scientists say contributes to global warming.

Other projects for hybrid or electric planes are in the works. Kirkland, Washington-based Zunum Aero says it is working on a 12-seat hybrid-electric commuter jet. The company's website lists its partners as Boeing, jetBlue Technology Ventures, and the Department of Commerce Clean Energy Fund.

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