

U.S. AIR FORCE SELECTS ELECTRA FOR ULTRA-SHORT TAKEOFF AIRCRAFT DEVELOPMENT

News / Manufacturer



U.S. Air Force has signed a contract with [Electra.aero](https://www.electra.aero) to strengthen advanced air mobility markets through the development of hybrid-electric propulsion systems for electric ultra-short takeoff and landing (eSTOL) aircraft. Leveraging distributed hybrid-electric propulsion and blown lift, Electra's unique eSTOL aircraft takes off in less than 150 feet, but also offers nearly triple the payload capacity, an order of magnitude longer ranges, and less than half the operating costs of electric vertical takeoff and landing alternatives.

"Electra is thrilled to be working in tandem with the U.S. Air Force and its innovative Agility Prime team to accelerate the tech transition of eSTOL into the commercial marketplace. These next-gen, low-carbon systems will solve several critical defense-related capability gaps while leveraging affordable commercial marketplace solutions," says Ben Marchionna, Electra's Director of Technology & Innovation.

Hybrid-electric systems are poised to transform how the USAF powers the fight of the future through game-changing energy efficiency improvements. They are also a fundamental enabler of sustainable aviation at-scale and commercial advanced air mobility markets – for both vertical and ultra-short takeoff and landing aircraft.

Agility Prime's Deputy Lead, Major John "Wasp" Tekell, adds, "Agility Prime is excited to partner with Electra on their recent Phase II SBIR contract award. We look forward to exploring the unique capabilities of this design while continuing to accelerate the electric aviation industry."

Electra's first propulsion system produces 150 kW (200 HP) of electrical power and comprises a small gas turbine and several custom components including a gearbox, generator, rectifier, control system, and software. Ground testing is planned this year followed by flight testing on the company's technology demonstrator aircraft in 2022. That aircraft, which carries two people and can take off and land in distances as short as 100 feet, will use this hybrid-electric turbogenerator to power eight electric motors and charge a custom battery system during flight.

Electra's first commercial product, with FAA certification planned in 2026, is designed to carry up to seven passengers and a pilot as far as 500 miles. It will serve urban and regional air mobility markets, sustainability-focused airline operations, "middle mile" cargo logistics, and air ambulance services.

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