



## **GE Aerospace awarded NASA contract for next phase of advanced engine compact core development**

- **Compact core technologies key for more fuel-efficient engine designs**

**EVENDALE, Ohio – December 15, 2023** – NASA has awarded GE Aerospace a contract for Phase 2 of the Hybrid Thermally Efficient Core (HyTEC) program, supporting continued technology development for the next-generation of commercial aircraft engines with the aim to significantly improve fuel efficiency and reduce emissions compared to engines today.

The new contract builds on work completed in Phase 1 of HyTEC for high-pressure compressor and high-pressure turbine advanced aerodynamics, as well as the combustor.

“We are grateful and proud to collaborate with NASA to invent the future of flight. With the HyTEC program, GE Aerospace looks to further advance aircraft engine core technologies beyond our current industry-leading propulsion systems for a once-in-a-generation improvement in fuel efficiency,” said Mohamed Ali, vice president of engineering for GE Aerospace.

Phase 2 will mature technologies for a core demonstrator test later this decade. Testing will also expand to include 100% Sustainable Aviation Fuel (SAF) combustion evaluation.

Additionally, GE Aerospace will further advance the state-of-the-art for engine integration of hybrid electric systems. Hybrid electric testing under HyTEC Phase 2 builds on GE Aerospace’s ongoing efforts to develop more electric engines, including the previously awarded NASA Turbofan Engine Power Extraction Demonstration under the first phase of HyTEC.

GE Aerospace and NASA have partnered [for more than 50 years](#) to accelerate the introduction of new innovations to the aviation industry.

HyTEC Phase 2 is a major demonstration within NASA’s Sustainable Flight National Partnership portfolio that will contribute to the U.S. goal of net-zero greenhouse gas emissions by 2050.

Currently, GE Aerospace is executing one of the most comprehensive technology demonstration roadmaps in the industry. [More than 100 tests](#) have been completed as part of CFM International’s RISE\* (Revolutionary Innovation for Sustainable Engines) program. The RISE program encompasses a suite of new aviation engine technology developments to increase propulsive and thermal efficiency, including open fan engine architecture and engine compact core work supported through HyTEC. The RISE program targets more than 20% improved fuel efficiency and 20% fewer CO<sub>2</sub> emissions by the mid-2030s compared to the most efficient engines today.

All GE Aerospace and CFM International engines can operate on approved SAF blends and new technologies are being developed for compatibility with alternative energy sources,

including 100% SAF. To date, GE Aerospace and its joint ventures have tested [10 different aircraft engine models with 100% SAF](#) through a mix of component-, engine-, and aircraft-level studies.

In another NASA collaboration, GE Aerospace is maturing an integrated, megawatt (MW)-class hybrid electric propulsion system as part of the [Electrified Powertrain Flight Demonstration \(EPFD\) program](#). Plans for EPFD call for ground and flight tests of the hybrid electric system this decade, in collaboration with Boeing, using a modified Saab 340B aircraft and GE Aerospace's CT7 engines.

*\* RISE is a registered trademark of CFM International, a 50/50 joint company between GE and Safran Aircraft Engines.*

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## **ABOUT GE AEROSPACE**

GE Aerospace is a world-leading provider of jet engines, components and systems for commercial and military aircraft with a global service network to support these offerings. GE Aerospace and its joint ventures have an installed base of more than 44,000 commercial and 26,000 military aircraft engines, and the business is playing a vital role in shaping the future of flight.

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